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STATE OF NEVADA

22ND BIENNIAL REPORT

FISCAL YEARS
1959–1960

DEPARTMENT OF HIGHWAYS

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STATE OF NEVADA

TWENTY-SECOND BIENNIAL REPORT

FISCAL YEARS 1959–1960

DEPARTMENT OF HIGHWAYS

letter of transmittal

To the Honorable Members of
The Board of Directors of the
Department of Highways
and the Nevada State Legislature

Your State Highway Engineer respectfully submits this, the Twenty-second Biennial Report of the Nevada Department of Highways covering the fiscal years 1959 and 1960.

State Highway Engineer.

The present State Highway Board has made it a policy frequently to meet with local officials in the various counties and make on-the-spot inspections of current road projects. Pictured here on an inspection are State Highway Engineer W. O. Wright and Board members, Controller Keith Lee, Governor Grant Sawyer, and Attorney General Roger Foley.

Appointed to top administrative positions early in 1960 were (left to right) W. O. Wright, State Highway Engineer; and R. E. Eldredge and John E. Bawden, both Deputy State Highway Engineers.

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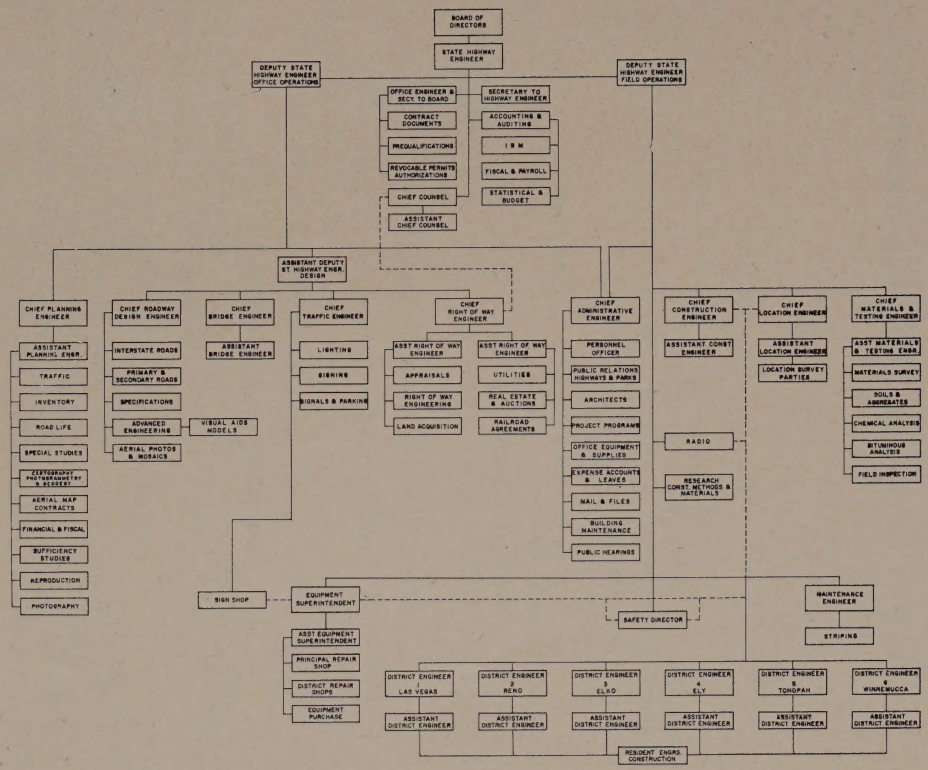
NEVADA HIGHWAY DEPARTMENT
ORGANIZATION CHART



HIGHWAY OFFICIALS AND DEPARTMENT HEADS

BOARD OF DIRECTORS

JULY 1, 1958 TO JANUARY 5, 1959

CHARLES H. RUSSELL, Governor ..... Chairman
HARVEY DICKERSON, Attorney General ..... Member
PETER MERIALDO, State Controller ..... Member

JANUARY 5, 1959 TO PRESENT

GRANT SAWYER, Governor ..... Chairman
ROGER D. FOLEY, Attorney General ..... Member
KEITH L. LEE, State Controller ..... Member

DEPARTMENT HEADS

JULY 1, 1958 TO FEBRUARY 2, 1959

H. D. MILLS ..... State Highway Engineer
W. T. HOLCOMB ..... Assistant State Highway Engineer

FEBRUARY 2, 1959–MARCH 15, 1960

EDWARD L. PINE ..... State Highway Engineer
W. O. WRIGHT ..... Assistant State Highway Engineer

MARCH 16, 1960 TO JUNE 30, 1960

W. O. WRIGHT ..... State Highway Engineer
JOHN E. BAWDEN ..... Deputy State Highway Engineer
R. E. ELDREDGE ..... Deputy State Highway Engineer

DIVISION ENGINEERS

AS OF JUNE 30, 1960

A. G. Kinne	Assistant Deputy Highway Engineer
D. H. Hays	Administrative Engineer
E. T. Boardman	Chief Bridge Engineer
Orvis Reil	Chief Planning Survey Engineer
James D. Wallace, Jr.	Chief Right of Way Engineer
William E. Freedman	Chief Counsel
Frank Quilici	Highway Equipment Superintendent
Richard W. Acheson	Assistant Highway Equipment Superintendent
Victor W. Clyde	Chief Construction Engineer
H. A. Squires	Maintenance Engineer
L. W. Little	Chief Materials and Testing Engineer
F. H. Morrison	Chief Research Engineer
Paul R. Rawls	Chief Location Engineer
Ralph J. Ottini	Chief Traffic Engineer
Stanley D. Sundeen	Office Engineer
Henry L. Clayton	Personnel Officer
Clarence S. Eiche	Chief Accountant
Donald L. Bowers	Public Information Officer
Roger E. Gaugler	Radio and Communications Supervisor
Joseph A. Moore	Safety Director

DISTRICT ENGINEERS

AS OF JUNE 30, 1960

G. B. Brockway, District Engineer	District No. 1
Vernon Sharp, Assistant District Engineer	District No. 1
J. L. Hancock, District Engineer	District No. 2
Jack Parvin, Assistant District Engineer	District No. 2
J. A. Glock, District Engineer	District No. 3
Henry H. Mayer, Assistant District Engineer	District No. 3
W. R. Parry, District Engineer	District No. 4
Michael J. Colletti, Assistant District Engineer	District No. 4
Paul E. Robbins, District Engineer	District No. 5
Dale V. Rose, District Engineer	District No. 6

HIGHWAY ENGINEER'S REPORT

As reflected in other sections of this report, over-all Highway Department activity rose to a new high during the biennium, with excellent progress noted particularly in our Interstate program. Reviewing the status of this program, we see (Table 11) that Nevada received during the past two-year period, more Federal-aid money for Interstate construction than was received during the first seven years of the program from 1952-1959. During the biennium we received over 10 million dollars for Interstate construction, this representing well over half of the 16 millions alloted to Nevada to date by the Federal Government.

This increase in Interstate allotments has made it possible for us to greatly step up work on the program in Nevada, especially in our design and right of way divisions where the important, preconstruction phases are carried out.

In the past two years, we opened to traffic 50.6 miles of modern, four-lane Interstate highways in Clark and Washoe Counties which are now serving the heavily populated urban centers in those areas. At the close of the biennium, we were about to begin construction on other portions of future Interstate Routes 80 and 15, including a 12.7-mile job over Golconda Summit and a 26-mile stretch in Churchill and Pershing Counties. In view of the fact that we are scheduled to receive even larger Federal grants for Interstate construction in the next two years—12.6 million in 1961 and 17.2 million in 1962—further rapid progress is assured.

As new miles of Interstate highways are opened, Nevadans are bound to become more sharply aware of the economic importance of these safer, faster highways which will not only make driving more pleasant, but also encourage larger numbers of tourists than ever before to spend vacations in our state.

Finally, to round out this brief examination of the current highway picture, we note that 149.8 miles of new or reconstructed Primary highways and 272 miles of Secondary highways have been completed during the biennium. At the end of this period, we had attained a total of 4,492.98 miles of improved highways of all types in Nevada.

Cost of road maintenance continues to rise as additional miles of new highways are added to the system each year. The latest increase is emphasized when we compare our current figure of $893 per mile with the average maintenance costs of previous years—1950, for example, when the figure was $412 per mile, and 1940 when the figure was $263. The situation as it now stands, then, might be summarized briefly as follows:

Nevadans have more and better roads than at any time in history, with further, significant improvements indicated for the years immediately ahead. Remembering that our foremost industry is tourism, we realize that these highways cannot have other than a beneficial effect on the state's economy in the future. At the same time, however, we must expect to pay more for the upkeep of these highways which, once built, become the full responsibility of the state.

PLANNING SURVEY DIVISION

Planning survey division of the Department exists by virtue of the Federal Aid Highway Act, wherein 1.5 percent of the Federal highway allotment to any state is available for economic surveys and research. State participation is on the same matching ratio as that for Federal-aid highway construction projects.

Studies are of two types: *continuing*, by which up-to-date highway statistics are maintained and data developed for the computation of trends; and *special*, by which technical and administrative projects are undertaken.

The survey division is divided into seven component sections wherein studies are pursued either individually in one section or jointly by several sections depending on the nature of the project.

INVENTORY

Three crews, composed of two men each, were active in field reinventory of roads during the biennium. This project, second in a series begun several years ago, covered 44,053 miles. Completion of the project shows that Elko County ranked first with 8,088 miles; Nye County second, with 5,752 miles; and White Pine County third, with 4,961 miles. Mapping control is under way in Nye and White Pine Counties. The third cycle of reinventory was started and work in Clark and Washoe Counties completed.

Streets of all incorporated cities in the state and of incorporated towns of 1,000 population or more were logged for mileage, width, and type. The log notes have been coded for IBM tabulation.

The inventory section readied the field log notes for use in the mapping section and for statistical purposes.

It was also responsible for compilation of the following logs:

1. Federal-aid Highway System, comprising the Primary state highway system.
2. Federal-aid Secondary system.
3. Non-Federal-aid state routes.
4. U. S. routes and alternate routes.
5. Federal Forest Highway System.

This section prepared semiannual tabulations of mileage and cost distribution on the Federal-aid Secondary system. It completed a compilation of state route descriptions during the biennium.

In March of 1960, two men were assigned to Nevada's first sufficiency rating study. Field work has been completed on the Primary system. The study is aimed at providing a guide for construction priorities. With due consideration of the volume of traffic on a section of road, substandard portions may be segregated and studied for programming. Beginning with a top rating of 100, a road section is studied for deficiencies and inadequacies that may reduce the perfect rating by varying amounts, resulting in a proper numerical rating.

MAPPING

Because Nevada is one of the fastest growing states in the Union, there is a big demand for maps from Federal and state agencies, engineers, attorneys, public relations people, and the general public.

During the biennium, revised county maps were completed for Eureka, Humboldt, and Lander Counties. In addition, a Caliente city map was published. Two-color state traffic flow maps for the years 1958 and 1959 were released, as were two-color traffic flow maps for Eureka and Lander Counties.

A new Elko County map is being compiled and will be released as soon as completed. A Winnemucca city map is in the final stages of production, with an early publication date scheduled.

County maps were issued showing control sections for all sections of road on Federal-aid Primary, Federal-aid Secondary, and other state interest roads.

Display material, such as color slides and maps, was prepared for use at public hearings.

Aerial mosaics were constructed of many areas in Nevada, the largest being of Reno-Sparks area. These and other aerial photos by the Department were indexed, classified, and made available to other departments and interested persons.

Official state road maps for 1959 and 1960 were developed in our planning survey division and were lithographed by a commercial map-maker.

Apart from regular mapping functions, innumerable sketches, maps, and graphs were prepared for other divisions of the Department.

PHOTOGRAMMETRY

Four aerial survey contracts were let by the Department covering an area of 28.46 square miles and a length of 58.1 miles. These contracts provided photographic and topographic map coverage used in roadway location and design, and in the establishment of primary control.

Checking of aerial map sheets and field review of contractors' work on five projects were completed by the section.

Since the formation of the photogrammetric section, topographic map sheets and control data have been supplied to cover design of 187 miles of the Interstate system, 29 miles of the Primary system, and two miles of the Secondary system.

TRAFFIC

Because traffic values provide one of the main criteria for the design of highways, the traffic section carries on an important function in the highway program.

To properly evaluate and expand a continuous flow of traffic counts, and to develop traffic flow diagrams and traffic counts at special locations, this section relies upon 21 permanent traffic-counting machines strategically located throughout the state. These machines count on an hourly basis throughout the year, and from their tape recordings are derived statistical data used by many private and public agencies. As a supplement to the fixed automatic traffic machines, approximately 391 cumulative-type machines gather traffic data on a set time basis and help to develop the over-all traffic values and patterns on system roads of major interest to the state.

During the biennium, traffic counting was completed on a county-wide basis, and traffic figures are now available for practically every

rural road and city street in the state. These counts completed the initial reinventory coverage of state counts originally obtained in 1936. This first revision of the 1936 data has been underway since 1948. Plans are now underway for the next up-dating of traffic information for the state. This type of counting keeps reliable traffic information available on a current basis.

Publications of the traffic section included an annual traffic report which contained complete annual statistics for state interest roads, and a pamphlet entitled "Tabulation of Annual Traffic Census." This census has been an annual project for the last 37 years. The tabulated publication showed traffic trends at certain key intersections throughout the state during July of each year, and comparative data for nine preceding years.

During the latter part of the biennium, considerable time was devoted to the development and evaluation of current traffic statistics and their projection into the highway design year of 1975. This study was requested by the Bureau of Public Roads, to be assembled into an over-all picture for eventual presentation to Congress.

ROAD LIFE

This section is responsible for the compilation of (1) a complete record of all construction performed by the Department, including both the physical characteristics and the cost of such items as preliminary engineering, right of way, and construction; and (2) a complete record of all state interest roads together with their descriptions and lengths. This information is used to determine the probable average life of roads by surface type, and to forecast the miles of each surface type that will have to be resurfaced or reconstructed each year. Such other information as the state's total investment in its highway system and the annual roadway cost for surface types is also available from the completed information.

During the biennium, the RL–7 graphs (record of construction characteristics) for Federal-aid Primary Routes 2, 3, 4, and 6 and Federal-aid Secondary Routes 500 to 600 were reduced, bound in book form, and distributed. All information on the RL–7 graphs has now been coded and punched on IBM cards, making machine tabulations for various studies possible. This will save time while giving greater accuracy, and allow a greater variety of studies to be made more rapidly.

The RL–1 forms, a complete record of construction and retirement, are being coded for construction characteristics. All Federal-aid Primary routes and about one-half of the Federal-aid Secondary routes are now completed. After this phase is finished the cost of construction will be added and all coded information will be punched on IBM cards, making possible a complete road life and cost study of all State Interest roads by utilization of IBM tabulations. From this, it is hoped that information may be obtained that will be useful to both the Department and other state agencies.

FINANCIAL

To round out the pattern for highway planning carried out in the inventory and traffic sections, the financial section compiles and maintains data on road-user funds.

In local fiscal operations accounting procedures are employed to indicate the disposition of county and municipal road and street receipts, disbursements, and debt status for such items as street lighting, storm sewers, parking meters, and off-street parking. Included in the figures are expenditures by all agencies providing funds for roads and streets. With this study a picture of the highway financial status of each political subdivision of the state is available.

During the biennium, statistical operations included the continuing of an analysis of vehicle characteristics as related to user-fees and monthly and yearly reports were issued on the findings. Monthly tables and graphs on motor vehicle registration and revenue, motor fuel consumption and revenue, carrier fees, and drivers license fees continued to receive wide use by research organizations and oil companies.

A preliminary study to clarify and define the Department's financial status was initiated during the biennium. This broad review, to be used in improving the operation of the Department, will be a continuing study carried out by the financial section.

SPECIAL STUDIES

The largest project completed by this section during the 1959-1960 period was the field work, its analysis, and publication of the report on the comprehensive out-of-state visitor survey begun in 1958. Requests for the report have come from most areas of the United States including Alaska and Hawaii and from agencies in Canada and Cuba. The study, a model for similar tourist surveys in other states, has provided Nevada agencies with their first reliable source of information on tourist expenditures and travel habits.

Origin and destination studies near all cities and towns on U. S. 40 and 91 were conducted during 1959. Data have been utilized to estimate traffic volumes on interchange ramps in urban areas and to figure the cost-benefit ratio for justification of their construction. Information acquired is being used to form a cost-benefit analysis for each proposed routing of freeways bypassing communities on Nevada's two interstate routes, and will aid in the determination of the final alignment. Studies concerning the economic impact on a community being bypassed are being completed for presentation at public hearings as required by federal law.

Special origination-destination studies were also conducted at Verdi and on State Route 78 northeast of Las Vegas.

The annual weight studies required by the Bureau of Public Roads were carried on in each year of the biennium.

The section assisted consultant engineering firms hired by the Department by providing them with information from past studies, with research material compiled in the division, and by reviewing their project reports for accuracy and proper methodology.

The section provided a great deal of information for the revised estimate of cost of the Interstate system requested by the Bureau of Public Roads. It also began, on a limited scale, studies needed in long-range traffic forecasts. These will be expanded in the future to meet the increasing demands for this type of information.

The division has recently become associated with the Western Council

for Travel Research and is represented at meetings of that organization. Two men representing the Department have been assigned to important committees, and one serves as national vice president of the council.

SURVEYS AND RECONNAISSANCE

During the biennium the reconnaissance and survey division employed two reconnaissance and supervisory location engineers and three to four full-time survey parties of six to seven men each, including field draftsmen. Four full-time parties were employed during the first three-quarters of the biennium and three full-time parties during the last quarter. However, in the coming biennium, some additional survey personnel may be required. This will largely depend on how much location survey work is completed this coming winter when, due to seasonal curtailment of highway construction work, several construction engineering crews are available for location survey assignments.

During the biennium, location survey work was conducted in nearly every county in the state. However, most of the surveys were made in the more populated counties where future highway needs are most pressing. This was especially true through the western and northern counties traversed by Interstate Route 80, and in Clark County traversed by Interstate Route 15. In addition to pending Interstate projects, there were many Primary and Secondary highway location projects throughout the state. Of the 590 miles surveyed by state forces during the biennium, 164 miles, or 28 percent, were on Interstate freeway projects; 241 miles, or 41 percent, on Primary highway projects; and 185 miles, or 31 percent, on Secondary highway projects. These surveys involved a total cost of $700,043.02, or about $1,186 per mile.

There was considerable variation in the survey cost per mile on the projects. This cost ran from $800 to $1,000 per mile on Primary and Secondary projects in open range country while surveys for multiple-lane highways on the Interstate system, surveys in urban areas, and other such complex projects which may have had unusual survey problems often cost $4,000 or more per mile.

One specific project surveyed during this biennium by state forces was a section of U. S. 95 along the west side of Walker Lake. With vertical rock cliffs on one side and a precipitous drop to the lake on the other side, ingenious methods and considerable time were employed in obtaining sufficient data for a highway design. Due to the difficult terrain and the unusual precautionary measures that were necessary for the safety of the survey crew, work was slow and expensive. Survey of this 8.3-mile project cost about $4,350 per mile.

During the past biennium, aerial surveys proved more satisfactory than ground studies for certain types of projects. This has been true on Interstate highway projects requiring multiple-lane highways through urban areas where a vast amount of detailed topography is encountered and through mountainous country where horizontal curvature and gradients are of primary concern. These projects are handled by various private aerial survey contractors who provide survey maps

of the area to be considered for future highway location. When these maps are received and checked for accuracy, highway locations are projected on them and the design completed in the office with little or no additional field work.

On the first few aerial survey contracts awarded, the contractor was required to establish the horizontal and vertical control necessary in preparing accurate topographic maps from aerial photographs. However, it was decided that the Department could establish this control more satisfactorily. These aerial surveys have been on the basis of the square miles of area covered by the surveys. However, the end result for the Department has been the lineal miles that could be designed and constructed.

Five aerial survey contracts were let during the biennium and are now substantially completed. These contracts involved 116.1 lineal miles and 56.675 square miles of aerial topography surveys at total contract costs of $169,545.63. The establishment of horizontal and vertical control and the subsequent map checking by state forces involved an additional cost of $88,760.41, for a total cost of $258,306.04, or an average of $2,225 per lineal mile. During the same period there was a total of 706.28 lineal miles of highway location surveys completed, including both aerial and ground surveys by state forces, at a total cost of $958,349.06, approximating the amount spent for this work during the 1957-1958 biennium.

DESIGN DIVISION

The function of the design division is to prepare plans, estimates and specifications for all construction, reconstruction and betterment projects undertaken by the Highway Department. This includes, in addition to highways, the various projects necessary to modernize and expand the highway plant to provide facilities for administration and maintenance.

In preparing a set of plans for a project, there is a vast amount of detailed work involved to incorporate in the design all data necessary to meet the requirements of the Bureau of Public Roads and to provide a contractor with all necessary information for the orderly and systematic construction of the work. The preliminary work required by design and other divisions includes review of the location to determine that proper service will be rendered; reconnaissance and survey to establish alignment, grades, topography, etc.; a traffic count and study to determine the amount and type of traffic that will use the facility; the preparation of project statement maps, sketch maps, and other maps required by the Bureau of Public Roads for Federal-aid projects; the assembling of data and other supporting information to place the project on a program requesting the use of Federal funds.

After this preliminary work is accomplished and the program approved by the Bureau of Public Roads, actual design is started. The first step is to prepare preliminary plans showing alignment, profile grade, a tentative grade line, pertinent topography and the required right-of-way widths. These preliminary plans are submitted

to the materials and research division for their use in sampling soils and developing borrow and gravel sources; to the right of way division for their use in securing the required rights of way; to the bridge division for their use in bridge design, if necessary, and to the construction division for their use in making a field investigation to determine grade control, structure sizes an locations, swell or shrink factors, geometric design standards and other information pertaining to design. The results and findings of these specialized studies and investigations are then correlated by the design division and incorporated into the final or over-all design of a project.

Design standards for a project are in accordance with specifications set up by the American Association of State Highway Officials for the applicable classification, i.e., Interstate, Primary, or Secondary. Standards are also controlled by the area, either rural or urban and by the type and volume of traffic to be served. Through the efforts of the AASHO a design manual has been developed which sets forth the minimum requirements for the various systems. The important controls and recommendations in the design manual are based on the amount and character of traffic and establish the width of travel lanes, width of shoulders, horizontal and vertical alignment, gradient, sight distance, superelevation and easements on curves, design speeds, thickness of base and surface, width of median on divided highways, channelized intersections, grade separations, etc. The design standards used by Nevada are, generally, higher than the recommended minimum set forth in the AASHO design manual.

During the biennium, the following projects were designed and placed under contract:

Number	Type	Cost	Mileage
5	Interstate highway projects	$10,767,561.00	49.499
14	Primary highway projects (F funds)	10,349,983.00	120.305
3	Primary highway projects (D funds)	1,909,189.00	28.931
1	Primary highway projects (N-Rd funds)	808,968.00	10.835
16	Secondary highway projects (S funds)	5,315,678.00	127.708
3	Secondary highway projects (D funds)	658,836.00	31.339
2	Urban highway projects	395,640.00	0.658
6	Aerial surveys	211,599.00	124.100
2	Highway lighting systems	54,409.67	.....
2	State highway projects*	55,458.00	3.095
6	Maintenance stations*	450,176.93	.....
1	Well drilling project*	1,200.00	.....
61		$30,978,698.60	496.470

Preliminary engineering costs on the above projects:

Highway construction projects	$998,400.00
Aerial surveys	416,232.00
Total	$1,414,632.00

A consulting engineering firm has also been employed for the survey, design, and preparation of plans on the following project:

Number	Description	Cost	Mileage
1	One-half mile west of Reno to Vista	$775,500.00	7.8

*Financed entirely with State funds.

There was an average of 90 employees assigned to the design division during the biennium which included supervisors, designers, specification writers, assistant designers, draftsmen, computers and engineering aides in design proper as well as two assigned to the engineering files. There has been no increase in the design personnel since the last biennium.

Design continues to become more and more complicated as regulations are developed in connection with the Interstate program and increased traffic requires the design and construction of channelized intersections, grade separations, multiple lane facilities, lighting and signal facilities, control of access, frontage roads, standardized signing, etc. The cost of preparing plans, estimates and specifications was approximately 3.5 percent of the total construction cost during the biennium.

The division made extensive use of aerial topographic maps in design during the biennium. A computer section was established and programs for traverse, earthwork, mass diagrams, etc., were developed for use with the IBM 604. The division also developed an aerial photographic section to fly, photograph, develop, and prepare aerial mosaic maps. These aerial mosaic maps, though of an uncontrolled type, are being produced to a scale accurate enough to be of great help in design.

BRIDGE DIVISION

Activity in the bridge division continues to show an increase over previous bienniums, with structures completed numbering 45 as compared to 38 during 1957-1958. In addition to those built, three structures have been widened. Construction and improvement of the 48 structures cost an estimated $1,954,432 compared to $1,846,750 for the previous biennium.

A large portion of this work has been on the new Interstate Route 15 through Clark County, and Interstate Route 80 in the northern part of the state. Design of Interstate highways required 32 structures during the biennium. Because standards set up for this system require limited access and separation of any roads crossing the system, 24 of these structures were either interchange or highway grade separation structures.

In Clark County 26 miles of Interstate 15 were completed from the California state line north toward Las Vegas, involving three interchange locations, four highway grade separation locations, and one railroad grade separation location. Each location involved two structures. In addition to this, a ten-mile section of Interstate Route 15 between Dry Lake and Crystal, which was started last biennium, was completed this biennium and included eight structures.

On Interstate Route 80 one contract was completed with one interchange structure. This added to the Interstate route already completed in the Truckee River Canyon east of Sparks for a total of 15 miles with five structures.

Construction was begun on a 13-mile section of Interstate 80 in Humboldt County between Golconda and the east foot of Golconda Summit involving 11 structures.

Just west of Ely the old overpass over the Nevada Northern Railroad was replaced by a new steel overpass 350 feet long and 40 feet wide. This is the longest and most expensive structure built during the biennium. The final cost was $286,699.

Just north of Caliente, three prestressed concrete bridges were built over the Meadow Valley Wash.

In Las Vegas, Charleston Boulevard underpass is being widened from two to four lanes.

In addition to the above projects, the design has been completed on 77 bridges and grade separation structures. The consulting firm of Gordon & Associates has completed design of 14 structures on Interstate 80 from the California state line to Lawtons. Another firm, DeLeuw, Cather & Company, has completed design of 23 structures on a section of Interstate 15 south of Las Vegas while the bridge division has completed design of 17 structures on a section of the same route and 23 structures in other section of the state.

CONSTRUCTION DIVISION

During the biennium, 52 contracts covering various highway projects including construction or reconstruction of 363.564 miles of road at an estimated cost of $25,723,137 were awarded. An additional five contracts were awarded for aerial surveys.

Of these 52 contracts, 36 were completed during the biennium, covering 223.119 miles at a contract cost of $15,250,969. There were 16 contracts underway, but not completed as of June 30, 1960, covering 140.445 miles at an estimated cost of $10,472,168.

In addition to the above, 30 contracts awarded prior to July 1, 1958, covering 260.936 miles, were completed during this biennium at a total contract cost of $15,204,561.

Included in the total contracts awarded were 10 for the construction of 64.202 miles of four-lane highway, 15 for the construction of 146.615 miles on the Primary system, seven for 48.648 miles on the Secondary system and 10 for the construction of 104.099 miles of roadmixed bituminous surface on the Secondary system. Six contracts were completed on construction of maintenance station buildings at Caliente, Currie, Imlay, Independence Valley, Diablo and Yerington at a cost of $450,177. The remaining projects included construction of a building for the Highway Patrol at the Jean Checking Station, the drilling of a well at the Independence Valley Maintenance Station, highway lighting at the Jean Interchange on U. S. 91, and installation of traffic signals at the junction of Fulcher Road and U. S. 91, in the Las Vegas area.

At a total cost of $11,111,297, ten contracts were awarded for the construction of 64.202 miles of four-lane highway for an average of $173,068 per mile. Five of these contracts covered 42.899 miles of the Interstate system as designated in the Highway Act of 1956; one on U. S. 40 in Washoe County, one on U. S. 40 in Humboldt County, and three on U. S. 91 in Clark County. As part of the Interstate program, the 12.685 miles of four-lane highway between one mile west of Golconda and the east foot of Golconda Summit set a record

as the largest contract yet awarded by the Department. The $3,694,175 contract which began in June, 1960 is expected to be completed during the 1961-1962 biennium.

In addition to State Highway Department projects, the Federal Bureau of Public Roads completed four jobs covering 28.942 miles of road at cost of $1,586,923.

Three of the four contracts involved building the new Mt. Rose road (State Route 28) to Lake Tahoe, the fourth, the paving of a portion of S.R. 11 in the Secret Pass area of the Ruby Mountains in Elko County.

Another portion of the state system was improved by the U. S. Indian Service in a $617,716 contract for reconstruction of 14.75 miles of S.R. 11A through the Owyhee Indian Reservation in northern Elko County.

Although these projects are financed entirely by federal funds and constructed under federal supervision, all maintenance on the routes is handled by the state.

TRAFFIC AND SIGNS DIVISION

The division of traffic and signs, headed by the traffic engineer, is responsible for the production and placing of signs, traffic control devices, highway lighting systems, and centerline striping on the improved state highway system.

Traffic studies, conducted in cooperation with the planning division, are made to obtain factual data concerning speed zones, traffic signal installations, pedestrian cross-walks, and intersection channelization. Considerable time is devoted to cooperating with cities and counties on their respective local traffic problems.

All signs used on the highway system are manufactured in the division's sign production shop located in Reno. Signs are manufactured in accordance with standards adopted by the American Association of State Highway Officials. With the increase of traffic, both in volume and speed, more and larger signs are being manufactured. This method of producing our own signs, rather than purchasing them, has proven its efficiency, as signs can be manufactured at considerable savings. Signs worth approximately $55,000 are being produced each year. Signs are sold to cities and counties in order to maintain uniform signs on all streets and highways. In addition to the central sign shop, sign shops are maintained in each district. These shops are primarily stock shops; however, minor sign repairs are made in the district shops.

During the past biennium, as part of our general highway construction program, traffic signal systems were installed at four intersections, and mercury vapor highway lighting systems were installed at three interchanges on the Interstate system and several channelized intersections on the Primary system.

Realizing that the placing of a center stripe constitutes one of the greatest single safety factors, the Department has increased its striping program so that approximately 3,600 miles of highway are now being striped annually at a cost of $100,000. In addition, pavement markings, such as shoulder striping, have been placed in numerous locations.

Following a policy in effect for the past few years, the division posted speed limits in several hazardous areas, such as U. S. 395 south of Reno. These speed zones have resulted in fewer accidents and have aided materially from a safety standpoint.

MATERIALS AND TESTING DIVISION

The materials and testing division functions as a coordinating agency for control and acceptance of materials used in construction, design, and maintenance of highways. Briefly, the principal duties are:

1. To conduct materials surveys of subgrade and local aggregate sources;
2. To test and evaluate materials survey samples in order to establish roadbed designs adequate for the types of traffic and climate for each particular section;
3. To train and supervise the personnel in testing and inspecting the job-site processed materials, such as subgrade, gravel base and surface, plantmix surface, concrete, etc.;
4. To inspect and test all prefabricated materials such as structural and reinforcing steel; vitrified clay, concrete, and corrugated metal pipe; portland cement; timber and timber preservatives; paints and many others;
5. To investigate material problems, ascertaining the cause and making recommendations for correction;
6. To carry on research toward improving test equipment and test methods and to better evaluate new and existing products.

This division works very closely with the design, bridge and right of way divisions of the Department and with outside agencies, namely city and county engineers, the Indian Service, Bureau of Public Roads and consulting engineers.

In order to keep abreast of increased highway construction and to better serve the other divisions in the Department, several pieces of new equipment have been installed in the laboratory. These include a mechanical mixer, mechanical kneading compactor, a 90,000-pound Riehle hydraulic press, two new ovens, Toledo balance, and incidental equipment for use in running Hveem stability tests. A mechanical spader has been ordered and will be installed along with the other machines in the research section. It is anticipated that when all the equipment is ready and tests are run, better asphalt mixes can be developed toward better and longer lasting roads.

During the last two years the following tests were made by the subsections of the materials and testing division:

MATERIALS TESTED

	1959	1960	Total
A. Asphalt Section—			
1. Liquid asphalts	1,309	828	2,137
2. Emulsified asphalts	138	74	212
3. Asphaltic cements, penet. grades	1,157	729	1,884
4. Extractions	267	224	491
5. CMP—CMAP, metal pipe	852	528	1,380
6. Wire (barb, woven, chain link)	42	109	151
7. Misc. (expan. joint, fence post, etc.)	45	20	65
Total, asphalt section			6,322
B. Soils Section—			
1. Gravel, surface base and fill materials—			
a. Pit samples on preliminary	1,244	1,064	2,308
b. Borrow	179	234	413
c. Finished product	226	197	423
2. Miscellaneous—			
a. Open graded	19	9	28
b. Screenings	20	16	36
c. Blotter sand	1	1	2
d. Chemical analysis on water	4	1	5
e. Backfill material	----	18	18
f. Special tests	----	29	29
3. Soils—			
a. Subgrade samples	1,651	1,338	2,989
b. Chemical analysis on soils	1,084	506	1,590
Total, soils section			7,841
C. Chemical Section—			
1. Chemical analysis—			
a. Portland cement—			
(1) Complete chemical analysis	1	3	4
(2) Alkali content only	----	3	3
b. Miscellaneous	9	2	11
2. Special tests—			
a. Paints	----	4	4
b. Determination of oil percent for base and surface aggregate	102	108	210
c. Unclassified—			
(1) Preece tests	24	11	35
(2) Raised traffic bars	2	3	5
(3) Raised traffic bars adhesive	----	2	2
(4) Miscellaneous	6	4	10
Total, chemical section			284
D. Cement (concrete) Section—			
1. Portland cement	65	27	92
2. Coarse and fine aggregate	129	108	237
3. Cylinders—			
a. Tested in Carson, but made at job site	748	383	1,131
b. Made in Carson laboratory	103	90	193
4. Building blocks—			
a. Compressive strength	80	13	93
b. Percent absorption	26	2	28
5. Pipe—			
a. For absorption test	1	6	7
b. Compressive strength	----	3	3
c. Miscellaneous and special	24	2	26
6. Riprap material	12	11	23
7. Air entraining agent	8	----	8
8. Water for concrete	4	1	5
9. Mortar sand	----	1	1
10. Concrete adhesive	----	2	2
11. Steel—			
a. Concrete reinforced bars	201	76	277
b. Structural steel	9	11	20
c. Miscellaneous	26	1	27
12. Soil cement stabilization, 4" x 8" cylinders	156	176	332
13. Special tests—			
a. Soundness (50 alter.) concrete pipe, transite drain pipe	2	1	3
b. Reference tests for cement reference lab.	4	6	10
Total, cement (concrete) section			2,518
Total samples run in Carson City, in two-year period			16,965

In addition, the following samples were tested in the Las Vegas Branch Laboratory:

	1959	1960	Total
Liquid asphalts	152	147	299
Penetration asphalts	566	460	1,026
Emulsified asphalts	29	22	51
Concrete cylinders	802	139	941
Concrete aggregates	78	42	120
Gravel and soils	59	43	102
Miscellaneous	202	56	258
Total for Las Vegas laboratory			2,797
Total for both laboratories			19,762

RIGHT OF WAY DIVISION

The right of way division has as its responsibility the acquisition of all real properties and property rights that are required for highway purposes. These include rights of way, maintenance station sites, material sites, radio tower sites, roadside recreational sites, and access rights. To accomplish these acquisitions requires a study of the proposed highway design as it will affect property to be traversed, determination of ownership, preparation of maps and land descriptions, appraisals, preparation of agreements, deeds, and other legal documents, and lastly, the negotiations for the needed property by right-of-way agents.

The division also arranges to move or adjust various utilities from within the properties acquired so that they will not interfere with highway construction. The removal, demolition, or other disposition of improvements from the properties acquired is also handled by the division.

Because of the enormity of the highway program and the increased participation by the Federal Government in the cost of obtaining and administering rights of way for Federal-aid projects, the Bureau of Public Roads is becoming increasingly concerned with complicated right-of-way problems. The Bureau accordingly has issued many new regulations governing reimbursement of expenditures made by the states for right-of-way acquisition, clearance and administration. These regulations have given additional responsibilities to the Department. A right-of-way manual was prepared in 1959 as required by the Bureau, and the activities of the division are carried out in conformance with its provisions.

The right of way division has increased its personnel from 30, as of June 30, 1958, to 39, as of June 30, 1960. All the employees work out of headquarters in Carson City except three men stationed in District One at Las Vegas.

The four sections within the division are engineering, appraisal, negotiation, and clearance (utilties and real estate), all of them augmented by clerical staff. Because of increased activity, the division faces a growing space problem, particularly a shortage of room for files.

There is close cooperation with the legal division since it is necessary that many of the papers prepared in connection with right-of-way work be reviewed and approved. Many condemnation matters are handled by the two divisions and this particular phase of the work will in all probability become more voluminous and time consuming.

During the biennium, the sum of $804,205 was expended for land purchases, together with the sum of $180,361 for damages and for adjustments and moving of improvements. These figures did not include salaries and expenses of personnel, court costs, fees, printing, office supplies, or incidentals.

Right-of-way agents are members of the Sacramento Chapter No. 27 of the American Right of Way Association and were instrumental in establishing a club affiliate in Nevada during the early part of 1960.

LEGAL DIVISION

The legal division is responsible for advising the Department in all legal matters. At present the staff consists of a deputy attorney general as chief counsel, two assistants, and a stenographer, as well as a deputy attorney general in Las Vegas who works on a part-time basis handling legal matters in that area.

The primary obligation of this division is the acquisition of real property for right of way when negotiations to purchase have failed.

At present there are approximately 25 suits pending before the courts, the great majority of which are condemnation cases. At the beginning of this biennium there were 20 cases pending, 30 cases were instituted during the last two years, and 31 cases were brought to conclusion. There are presently 19 condemnations still pending.

OFFICE ENGINEER

CONTRACTS AND LETTINGS

During the biennium, 58 highway contracts were awarded at 33 bid openings. This is a decrease of 10 contracts and a decrease of 14 bid openings over the previous biennium. In addition, five aerial survey contracts were awarded at four bid openings. The average number of bidders on highway construction projects was six and on aerial survey contracts it was five, approximately the same number as for the past two bienniums.

Information relative to the miles of construction and reconstruction completed and under contract on the designated state highway system at the close of the biennium will be found under Table 14.

The five aerial survey contracts awarded covered approximately 109.1 miles.

PREQUALIFICATION OF CONTRACTORS

During the biennium, the number of contractors qualified to bid has increased slightly. At the start of the biennium there were 100 approved prequalified contractors and at the close, 109.

Following is a tabulation indicating the number of contractors prequalified by the Department at the close of the biennium, arranged in brackets of bid ratings:

Rating	Number of contractors
$5,000,000 and over	36
2,500,000 to 5,000,000	22
1,500,000 to 2,500,000	7
1,000,000 to 1,500,000	4
500,000 to 1,000,000	18
250,000 to 500,000	15
100,000 to 250,000	7

The relative number of contractors in each bid bracket during the biennium has remained nearly the same as for the previous biennium, although the increase in prequalified contractors seems to be in the highest bracket.

PERMITS

A. Highway Encroachments—

During the biennium 356 permits were issued for the following encroachment categories:

Telephone and telegraph lines	88
Power lines	30
Service pipe—	
Gas lines	26
Water lines	57
Sewer lines	34
Culverts	13
Approach roads and driveways	91
Miscellaneous	17
Total	356

The above total indicates a slight decrease over the previous biennium in the number of permits issued, especially in the telephone and power line categories. This does not mean that the utility companies were doing less work, but rather that their permit requests instead of covering numerous small adjustments or additions to their facilities, embraced larger and more extensive work.

B. Transportation—

Requests for permits continue to increase at an accelerated rate. At the start of the biennium, slightly over 440 permits per month were being issued and this rose to around 800 per month at the close of the biennium.

A total of 13,131 permits for loads exceeding legal limits were issued during the biennium, an increase of 7,684 over the previous biennium. In some cases, several loads were moved under one permit. The following types of loads were moved under these permits:

Heavy and highway industry	5,795
Farm equipment	306
House trailers	8,252
Buildings	1,168
Military	409
Prefabricated steel items	351
Miscellaneous	636
Total	16,917

With the exception of buildings, a remarkable growth is noted in all of these categories, especially in permits for house trailers, movement of which is already creating a serious traffic problem.

In addition to the above, 39 continuous overload permits were issued for mine to mill, or production source to processing point movement. This type of permit provides for axle loadings not to exceed determined limits and for movement over a prescribed routing. Materials moved under this authority included logs, silicia sands, cinders, flourspar, aggregates, and bulk cement.

It should be pointed out that of the 5,795 permits issued for heavy and highway industry, 1,771 cover construction equipment and are "blanket-type" permits. Such permits allow the movement of listed equipment over a general area, usually within a certain radius of the permittee's headquarters and over approved routings under the jurisdiction of the Department. No attempt has been made to determine the number of individual unit movements made under this form of permit, but is a very considerable number.

AUTHORIZATION

During the biennium, 196 job authorizations for additions and betterments and extraordinary maintenance were in effect. The following table indicates the number of authorizations issued to each district and the total expenditures covered by the authorization.

District	Number of authorizations	Total expenditures during biennium	Incomplete job authorizations	Grand total
One	29	$215,923.31	$26,700.03	$242,623.34
Two	45	196,894.01	24,039.26	220,933.27
Three	52	253,566.55	2,169.17	255,735.72
Four	24	106,419.12	7,617.66	114,036.78
Five	27	227,002.60	44,267.93	271,270.53
Division headquarters	10	26,480.97	4,851.16	31,332.13
Equipment plant	9	3,253.25	951.73	4,204.98
Totals	196	*$1,029,539.81	$110,596.94	$1,140,136.75

*Includes $160,677.15 authorized during previous biennium, but expended during this biennium.

SECRETARY—BOARD OF HIGHWAY DIRECTORS

During the biennium, it was necessary for the board to hold 86 meetings for the purpose of opening bids, meeting with delegations, conducting hearings, and disposing of all business required by law to come before it.

ADMINISTRATIVE DIVISION

The administrative division of the Department was formed early in 1960 to group together all service organizations at headquarters. The following sections were placed under the administrative engineer for administration and supervision: personnel section, public information section, stores and purchasing section, building and maintenance section, Federal-aid programming section, architect section, and the files and mail section.

In addition to the above this office is responsible for the following:

Public Hearings—The administrative engineer moderates all public hearings and personally oversees all arrangements for the hearings. This includes preparation of mosaics, slides and other exhibits, publication of legal notices, notification of all interested city, county, state and government officials of the time and place; the recording and transcribing of hearings and the distribution of copies of the hearing transcriptions to interested parties; and the preparation of the necessary suggested resolutions following the hearing for the approval of state, county and city officials. During the 1959–1960 biennium, 13 hearings were held.

Federal Funds—A running account is kept and charts are prepared on status of Federal highway funds of all systems, showing amounts obligated and amounts under agreement. This insures that apportioned funds are used and none allowed to lapse. This office also supervises preparation of a quarterly Federal-aid expenditures projection report.

Budgets—A yearly budget for construction projects is prepared as well as construction budgets for two and three-year periods.

Monthly Status Report—The office supervises preparation of a monthly construction report which lists each project under design and shows the percentage of work completed by each division concerned with the project. This report is primarily a management tool.

Cost Index—A quarterly report is prepared to show an index of construction costs of highway work and such allied information as number of bidders per contract and number of contracts in certain cost classifications.

Engineering Authorizations—The division helps prepare and recommends approval of all engineering authorizations necessary before any work can be started on the planning, location or design.

Field Survey Automotive Equipment—The assignment of all vehicles for field survey crews is handled through this office.

Expense Accounts—All expense accounts are approved by the administrative engineer.

Purchase Orders and Bills—The division approves all purchase orders and payment of bills for purchase of office supplies and equipment.

Civil Defense—The administrative engineer represents the Department in civil defense matters.

PERSONNEL SECTION

During the biennium, the Highway Department was confronted with an organizational problem that involved personnel and the administrative organization of the various operations. This problem was caused by many factors; however, the major items were:

1. The rapid growth of the Department due to the 1954 Federal-Aid Act and the Federal-Aid Act of 1956.
2. The urgent need to make more effective use of the professional, technical, and specialized skills of Department employees.
3. The need to keep pace with modern principles of management and personnel administration.

Prior to the past biennium, the assistant state highway engineer had as many as 17 division heads reporting to him directly or to the state highway engineer. The administration recognized that this type of organization could become ineffective, and steps were taken to insure a more effective administrative organization. It was also recognized that problems of this type were ever-present and a continuous program of improvement must be maintained.

As a result of the above problems, the administration has reorganized the Highway Department into two major units. The top administrative organization is as listed below:

1. Deputy state highway engineer in charge of all planning and designing functions including right-of-way procurement.
2. Deputy state highway engineer in charge of all construction and maintenance operations, including construction materials and equipment.

As a further step in reorganization an administrative engineer was placed in charge of staff functions and services.

Other organizational changes have been made and studies are underway to determine the necessity of future changes.

In order to secure more efficient use of Department personnel, training programs have been expanded to cover a large number of employees. Training programs in supervisory management, electronic data processing, engineering mathematics, drafting, communications, photogrammetry and other fields were offered during the past biennium. The classes were well attended with both employees and the Department benefiting. The most recent training program to be started in the Department is a course in highway technology under the direction of the University of Nevada. The State Department of Education has been instrumental in the establishment of all training programs. The current program will require 40 semester credits for completion and will offer credit sufficient for an associate engineering degree.

The Department has continued to encourage the employment of engineering students and graduates. Steps have been taken to make highway employment more attractive to the college engineering graduate.

The average number of employees has continued to increase due to the growth of the highway system and the state. However, during the past biennium the increase was very small due to more efficient use of personnel. The peak of employment was 1,019 and the low was 920 employees. The average number of employees over the past three bienniums was as follows:

1954–1956, 791 employees
1956–1958, 954 employees
1958–1960, 964 employees

As a result of the reorganization study, the Department personnel office was changed to a full-time position under the administrative engineer in charge of staff services.

PUBLIC INFORMATION SECTION

Since the Highway Department is a public agency serving the taxpayers of the state, it is essential that Nevadans be told everything they want to know about highway operations. This is one of the main functions of the public information section—telling the Nevada highway story through news releases, pictures, exhibits, films and occasional

speeches. Dozens of news releases are sent out every year to newspapers, radio and TV stations. In addition, special features on highway matters are prepared for local use as well as for trade publications in other states.

A second important function of the office is the encouragement of tourist traffic over Nevada's highways through publication of the *Nevada Highways and Parks* magazine. Three issues were mailed out during the biennium and a fourth was being completed at the State Printing Office. Response to the magazine has been excellent, as is evidenced by the hundreds of new requests from out of state that are received whenever a new issue is announced. Further evidence of the magazine's popularity is seen in results of a reader survey taken last year in which thousands of readers—Nevadans as well as out-of-state recipients—replied that they would pay for subscriptions. Rapid growth of the magazine in recent years indicates that a commercial operation should be seriously considered as a means of improving the publication as well as cutting production costs.

In addition to the magazine, the public information section mailed out thousands of tourist brochures concerning Nevada to prospective visitors. Included in this distribution were 659,150 copies of the official state map.

Among the responsibilities of the section are the preparation of highway publications such as the Biennial Report, an employee newspaper, and reports such as the monthly road condition bulletin. The section also takes part in public hearings and sets up the winter telephone road report service which has proven extremely popular in western Nevada.

STORES AND PURCHASING SECTION

This section has the responsibility of maintaining a sufficient stock of office and engineering supplies and equipment to take care of the needs of the Department throughout the entire state. Normally an average of $25,000 in stock alone is maintained.

Property inventory value of office equipment, furniture and engineering supplies controlled by headquarters as of January 1, 1959, amounted to a total of $155,171.40. This inventory is carried on a calendar year basis.

Total purchases for fiscal years 1959–1960 handled through the section amounted to $290,787.36. This figure includes supplies and services connected with maintenance of the headquarters office building.

Due to a recent change in policy whereby all purchase orders for supplies and equipment mentioned above must originate in this section the responsibility has increased considerably. This will naturally reflect a substantial increase in future purchases.

A continuing study is made of market trends for best purchases and to determine if trade-in values are correct and if old equipment has been used to a reasonable maximum.

Stock disbursements for the biennium were $55,167.35.

A biennial inventory is taken each January 1, covering property controlled by headquarters including office equipment, furniture and engineering supplies. This data is submitted to Nevada State Purchasing Department as required by law.

A perpetual inventory is kept on the stock of forms and supplies used in headquarters and field offices. Transits, levels, other engineering equipment and office machines are checked constantly and repaired when necessary.

For standard size forms, multilith machines in this section produce specifications and proposals of the following types—contracts, notices to contractors of bids, notices of award of contracts, road study logs, including charts, traffic reports, loadometer reports, statistical data, form letters and departmental memorandums, and weekly, monthly, quarterly, semiannual and annual reports.

An addressograph mailing list is kept up to date for distribution of the *Nevada Highways and Parks* magazine, of official state road maps, notices to contractors, notices of award, press releases and the highway employee publication. In addition, this section collates and binds books, and pamphlets; receives, unpacks and checks all incoming merchandise and equipment; and packs, weighs and ships all fourth-class mail and all shipments by express and freight.

ARCHITECTURAL SECTION

During the biennium, this section completed nine major projects and began several others. Except for several roadside parks and miscellaneous repairs, all construction projects undertaken by this section during the biennium were for maintenance stations or inspection and weighing stations.

In the chronological order of their completion, the projects were:

Wells Port of Entry—On May 5, 1958, work began on the Wells truck checking and weighing station for use by the State Highway Patrol. The project included a 16x24-foot frame building, a deep water well with pressure system, overhead highway lighting, and construction of bituminous-surfaced acceleration and deceleration lanes and parking area. The sum of $35,106 was expended on the project, $28,554 of which was appropriated by the 1957–1958 Legislature. The station was completed and accepted on August 21, 1958.

Pine Valley Maintenance Station—Located on State Route 20, 30 miles south of Carlin, the new maintenance station includes a masonry block and concrete shop building, masonry block equipment storage sheds, motor fuel depot, water supply system, and fencing. Work was completed and accepted October 10, 1958, at a cost of $98,000.

Ruby Valley Maintenance Station—A new station was also built in Ruby Valley, on State Route 11, 33 miles south of Wells. The project included construction of a concrete and masonry block maintenance shop, masonry block equipment storage sheds, two frame residences, motor fuel depot, deep water well, and fencing. The project was completed and accepted November 26, 1958, at a cost of $95,337.57.

Diablo Maintenance Station—Located on State Route 25, 82.5 miles southeast of Tonopah, in Nye County, the new facility consists of a masonry block and concrete shop building, masonry block equipment storage sheds, motor fuel depot, two frame residences, deep well water supply and fencing. Work on the $96,482 job was completed and accepted February 3, 1959.

Caliente Maintenance Station—The new maintenance station is located in Caliente on U. S. 93 and includes a concrete and masonry block shop building, motor fuel depot, and fencing. Work was completed December 24, 1958, at a cost of $35,065.

Yerington Maintenance Station—A station was constructed at Yerington, on the site of the old station. The former site was enlarged by the addition of an adjoining parcel of land two-thirds of an acre in size, donated to the Department by the City of Yerington. The improvement consists of a concrete and masonry block shop building, masonry block storage sheds, motor fuel depot, and fencing. Construction was started February 11, 1959 and completed July 8, 1959, at a cost of $56,404.

Currie Maintenance Station—Additions were made to the Currie Maintenance Station, located in Currie on U. S. 93, 63 miles south of Wells. The new construction included a concrete and masonry block shop building, new foreman's residence, deep well and pump, diesel electric plant, and fencing. The project was accepted October 1, 1959, at a cost of $63,721.60.

Imlay Maintenance Station—New maintenance facilities were built on U. S. Highway 40, one-half mile east of Imlay. Constructed were a concrete and masonry block shop building, a motor fuel depot, two frame residences, and fencing. Work began on June 22, 1959 and was completed and accepted on December 3, 1959. Cost of the project was $94,976.

Jean Weigh and Inspection Station—Located on Interstate Highway 15, approximately 25 miles south of Las Vegas, this facility was built for use by the State Highway Patrol. In addition to a frame building containing approximately 650 square feet, the station has a deep well, pressure system and sanitary facilities. A feature of the building is a pneumatic tube system which permits southbound truckers to send messages or cash across the divided highway to the office which is located in the northbound lane. Also included are loadometers for weighing trucks, located on both lanes. Bituminous-surfaced deceleration and acceleration lanes, overhead lighting, and parking area are incorporated in the plan.

Construction commenced on March 17, 1960 and the work completed on May 20, 1960, at a cost of $24,786.

Virginia City Maintenance Station—As the biennium ended, construction began on a new maintenance station in Virginia City, on State Route 80. This facility will cost approximately $60,000.

In addition to the projects listed, the Department constructed or enlarged nine roadside parks during the biennium. Included were one in Storey County on State Route 17, one in Churchill County on

U. S. 50, one in Mineral County on U. S. 95 at Walker Lake, two in Clark County on Interstate Route 15, one in Mineral County on U. S. 6, with several others under construction as the biennium ended.

As traffic increases and the road net expands, additional maintenance facilities will be required.

Location of maintenance stations and priority of construction are determined on the basis of need. Many present stations are old and substandard and require enlarging or extensive remodeling. This is being undertaken as time and funds permit.

The nine major projects completed in the 1959–1960 biennium represent an expenditure of $599,877.

CENTRAL FILES AND MAIL SECTION

A five-year records retention program ended on December 31, 1959, and a systematic transfer of records from active to inactive files will be carried out each year henceforth.

This five-year program was established by the business services department of Remington Rand in 1956 when the general files and mail section was reorganized. At that time the records were analyzed by consultants and an organizer trained a staff of five records clerks and a supervisor in the operation and maintenance of the improved filing system.

The new system with a manual of instructions, use of standard office indices, and an improved method of filing revocable permits and other items now expedite record finding as well as simplify classification and filing. New filing aids in use include a new type of file folders, colored labels, guides, and charge-out cards. These have improved the neatness and appearance of the file drawers.

The increase of employees and expansion of work in all divisions has made storage a growing problem. As an example, employee time-sheet unit files have increased from 10 to 25 drawers. Thus the section is now planning to streamline the files through microfilming and other methods.

New equipment, such as mail and file sorters, a power controlled letter opener and a postage meter machine, has been helpful in handling increased volumes of incoming and outgoing mail. A high-speed copier aids in the control of records, permitting the mail clerks to place important incoming material on record as soon as received.

ACCOUNTING DIVISION

Operations and responsibilities of the accounting division have grown in the past several years, not only because over-all Department activity is greater, but also because the Bureau of Public Roads has required tighter fiscal control of Federal moneys. The heavier work load throughout the accounting division, however, has been handled by increased use of punched card machines. Probably the most noticeable advances have been made in the field of data processing as reflected in the operations of the IBM section.

In January, 1958, the Department received an IBM Model 604

electronic calculating punch, and has developed or adapted programs for cut and fill design, payroll, and vehicle and fleet operating costs and rentals. Additional programs for triangulation, traverse and area quantities are now in the process of formulation. However, because limitations of the IBM 604 have been realized for some time, an order has been placed for an IBM Model 609 electronic computer, with delivery anticipated for January, 1961. Operational programs in use at the present time are being revised and adapted for the new machine, and programs in process of formulation are being specifically designed for IBM 609 applications. The increased speed and flexibility and enlarged capacity of this newer machine, together with development and acquisition of additional programs, will greatly increase the effectiveness and value of data processing operations and serve to relieve an increasing number of skilled engineers and technicians of the more tedious, repetitive, routine and time-consuming calculations.

Electronic computer operation and programing is a highly technical field, and optimum benefit from computers and their related data processing instruments can be derived only by careful planning of applications and scheduling of machine time functions and operations. In the interest of planning these operations, a committee called the data processing steering committee has recently been appointed, with representatives from engineering, planning, accounting and the IBM divisions—those primarily interested in computer applications. This committee has been charged with the responsibility of establishing methods and procedures to utilize all data processing equipment to the fullest extent possible.

In order to accomplish this, the committee has undertaken to effect a continuing study of adapting additional operational procedures to machine processing methods, with particular emphasis on computer applications; of establishing priorities and time schedules for all data processing work; of establishing educational programs for the benefit of all users or potential users of data processing methods and machines; and of developing methods for evaluation of the effectiveness and economy of the Department data processing installation.

SAFETY DIVISION

Since the formation of the safety section in January, 1958, inspections of all facilities have been made by the safety director and members of district safety committees.

A program for the purchase of equipment with necessary safeguards built in was inaugurated and is now standard procedure.

Fire-fighting equipment was brought up to standard and key employees were trained in servicing the equipment.

Studies were conducted to determine what personal protection equipment was necessary on each job.

Through correspondence with other highway departments, contact with all employees, and meetings with our insurance carriers, it was determined that safety training was of the utmost importance in the development of our program. This phase of the over-all safety effort is now progressing and will be of paramount importance in reducing the accidents within the Department. Over 322 employees received

first aid instruction, five employees attended an avalanche school and 20 employees attended a course on occupational safety conducted by the Bureau of Labor Standards.

A six-hour first aid refresher course will be given to all employees as well as a six-hour supervisors' course and meetings for all field forces during the next biennial period.

Chart 8 on page 60 illustrates the accident record during the past two-year period. All but the figures on accident severity show a decline. Increase in this column was due to a death and two serious accidents which were not reflected in the previous report.

COMMUNICATIONS DIVISION

During the 1959–1960 biennium the Department owned, operated and maintained 312 mobile radios, 38 base stations and 10 mountain-top relay facilities. Most of the mobile equipment is installed in various Department vehicles while the stations and mountain-top repeaters are located at various sites throughout the state to provide internal District communication and a statewide radio net.

All six Districts have integral radio equipment, both base and mobile units, and the necessary mountain-top stations. Maintaining this widespread network of communication is a working force of eight radio technicians, one full-time technician for each District and three operating on a statewide basis.

The prime function of the communications division is to provide radio contact between the various District offices and their respective field personnel in both construction and maintenance. In addition, during the past biennium, the division has been responsible for dissemination of road information during the winter months through the establishment by the Department of a daily road report service.

Biennial activity also included providing personnel and public address equipment for public hearings, installing and maintaining temporary radio stations for traffic control at both ends of the Walker Lake job (U. S. 95), and maintaining radio equipment for the State Highway Patrol.

To facilitate the expansion of communications operations in the state, a new radio repair building was constructed in the Reno equipment yard and a new higher powered transmitter installed on Slide Mountain, southwest of Reno. During the 1959–1960 winter season, two operators were added on a part-time basis to handle the road condition report service on a 24-hour basis. At the same time, headquarters for the communications division were moved from the Carson office to the Equipment yard in Reno.

EQUIPMENT DIVISION

To keep pace with the expanding highway program, and in the interest of economy, the equipment division has enlarged the highway maintenance fleet both in numbers and capacity of units.

The increase in requirements for equipment to maintain the highway system was created by additional mileage of highways. In addition to increased mileage, the new highways increased radically in width. At the same time the requirements of the traveling public increased.

This meant more traffic and a demand for more snow removal, sanding, shoulder improvement, oiling, and other maintenance equipment.

During the fiscal years 1958–1959 and 1959–1960, 264 units of equipment were purchased, at a total cost of $1,118,000. During the same period a total of 156 units were sold due to obsolescence.

While the fleet has increased in numbers, and the demands on the equipment division are much greater, the number of employees in the equipment division has remained the same.

The equipment division feels that due to increased width, mileage, and design of freeways, the snow removal equipment it now owns is fast becoming obsolete. Much study has been made of this problem. One resulting conclusion, especially apparent, is that the manufacturers have not as yet put equipment on the market that will solve this problem.

DISTRICT OPERATIONS

With the end of this biennium came the first major change in the statewide organization of the Highway Department in over three decades. Effective July 1, 1960, the state was divided into six, instead of five, engineering and maintenance districts (formerly called divisions). Main district offices will now be in Winnemucca as well as in Las Vegas, Reno, Elko, Ely, and Tonopah.

As a preliminary step to the establishment of the new Winnemucca district (District Six) a second assistant was appointed for the District Three engineer in Elko and his office was set up in Winnemucca early in 1960. At the same time preliminary plans were made for the formation of the new district which includes former portions of Districts Two and Three.

Under the new organization as under the old, the districts are responsible for maintaining all roads on the state system. Consequently, with the current growth in the size of the system has come an increase in the work load of each district. To insure that service to the driving public is continually improved, the districts have had to expend additional effort in such nonmaintenance activities as roadside improvement and cleanup.

To handle the expanding program, most of the districts increased their personnel and facilities, as noted below:

District	Miles maintained	Average employed	Maintenance stations
One (Las Vegas)	708 (*685)	115 (*80)	9 (*9)
Two (Reno)	1,076 (1,063)	115 (105)	19 (17)
Three (Elko)	959 (930)	81 (70)	15 (12)
Four (East Ely)	857 (850)	55 (58)	11 (11)
Five (Tonopah)	846 (849)	65 (60)	12 (11)

*Figure from 1957–1958 biennium.

During the biennium, district activity included the construction of 395 miles of new highway; 46 miles on the Interstate, 174 on the Primary, and 175 on the Secondary system. Construction costs for the period totaled nearly 9.5 million dollars on the two Interstate routes, over 10 million on the Primary roads, and nearly eight million on Secondary highways.

In District One, resident engineers completed 36 miles of Interstate 15 (U. S. 91) from the California line to Sloan and from 24 to 34 miles northeast of Las Vegas at a cost of $6,398,994. At the same time work was finished on three miles of Primary routes costing $50,603, and on two miles of Secondary roads for $24,786. During the two-year period, a 10,000 gallon asphalt storage tank was installed in the Las Vegas maintenance yard, a well drilled and cased at the Jean checking station on Interstate 15, and two roadside rests built on completed portions of that route, one near the California line and the other near the entrance to Valley of Fire State Park. Maintenance crews also widened U. S. 95 from Railroad Pass to the California line and from State Route 16 to Beatty.

Operations in District Two included completion of 10 miles of Interstate 80 (U. S. 40) through the Truckee River Canyon east of Sparks for $3,040,000, 50 miles of Primary routes for $2,968,000, and 93 miles of Secondary roads for $3,637,000. New maintenance stations were also built at Yerington and Imlay, four roadside rests constructed, a new radio repair building installed at the maintenance yard in Reno, and a new maintenance garage completed at Incline on S. R. 27 (Mt. Rose road) to Lake Tahoe.

District Three activity during the two-year period included completion of 24 miles of Primary highway costing $1,776,868, and 6 miles of Secondary routes costing $272,107. New maintenance stations were built at Ruby Valley and Pine Valley and one is currently under construction at Independence Valley, north of Tuscarora.

Construction in District Four during the biennium included 89 miles of Primary roads and 47 miles of Secondary highway, costing $5,418,248 and $1,032,180, respectively. At the same time, a new residence and garage were completed at the Currie station while a new station was finished at Caliente.

At a cost of $450,000, 8.23 miles of new Primary highway were constructed in District Five, in addition to the $708,250 spent to build 26.43 miles of Secondary routes. During the same two-year period a new maintenance station was completed on S. R. 25 at Diablo and a new pump house finished at the Sarcobatus station on U. S. 95.

For driver convenience a new roadside rest was built at Basalt, adding to the two existing facilities in the district, all with water, restrooms and shade.

Providing roadside parks for the motorists has become one of the most important jobs handled by the districts. The growing importance of this program is reflected in the fact that provision for these facilities is now being made a part of highway construction projects. At the end of the biennial period there were 44 such rest areas along the state's highways, 21 of which had drinking water, 15 had restrooms, and 27 had shade. According to reports, all the parks are used to capacity both as meal and rest stops. One of the most requested items of information by tourists is a list of roadside areas and to accommodate this demand, the Department plans to further improve and expand the facilities in the next biennium.

counts eivable	Other: Miscellaneous	Total
----------	$160,570.54	$160,570.54
----------	77,699.94	141,551.04
730.56	220,281.27	473,302.96
496.18	608,056.04	1,281,380.02
192.07	541,000.31	1,637,759.52
019.61	145,456.88	1,329,183.82
751.67	147,979.87	1,952,887.13
092.07	120,622.72	3,149,400.06
951.88	229,849.54	2,891,932.75
299.26	40,632.64	1,784,749.59
773.10	163,477.52	1,991,942.97
991.50	113,635.12	1,859,197.96
422.93	163,407.87	2,376,825.66
268.16	107,118.46	2,258,249.77
369.41	250,939.51	1,531,903.86
094.40	305,737.14	4,157,963.71
683.76	391,299.32	3,859,245.38
097.69	46,347.96	4,721,482.46
736.27	51,097.01	5,143,106.73
144.68	14,039.12	5,609,611.47
488.96	19,185.64	5,021,993.57
245.50	114,680.77	4,883,144.66
475.66	1,000.00	4,589,222.84
913.41	14,390.97	3,977,831.75
763.04	10,859.87	4,367,082.38
217.03	1,030.96	4,693,013.87
948.03	----------	4,972,839.95
583.66	650.00	4,091,827.96
928.12	167.53	2,875.332.09
139.50	27.86	3,563,685.87
429.56	101.54	6,669,073.29
672.48	142.66	6,541,147.43
141.47	11.59	8,027,183.90
072.37	1.20	8,645,043.34
866.55	----------	9,103,181.88
897.83	----------	9,311,029.41
764.61	101,538.74	12,773,279.57
473.95	----------	12,356,422.60
319.74	60,220.21	12,723,340.71
506.20	----------	16,349,055.57
885.81	25,102.44	19,678,452.58
354.25	----------	24,212,092.40
185.09	----------	25,937,206.62
783.99	----------	22,932,389.43
172.01	$4,248,360.76	$286,607,121.07

TABLE 1

HISTORICAL RECORD—HIGHWAY REVENUE—1917–1960

Year	Highway Users Revenues				Participation By Others			Other		
	State's share gas and diesel fuel tax	Motor vehicle registration fees	Carrier license fees	Drivers' licenses	Federal aid	City and county	Other	Accounts receivable	Miscellaneous	Total
1917	----------	----------	----------	----------	----------	----------	----------	----------	$160,570.54	$160,570.54
1918	----------	$63,851.10	----------	----------	----------	----------	----------	----------	77,699.94	141,551.04
1919	----------	30,738.25	----------	----------	$125,570.65	$88,982.23	----------	$7,730.56	220,281.27	473,302.96
1920	----------	329.75	----------	----------	385,906.73	225,211.32	$16,380.00	45,496.18	608,056.04	1,281,380.02
1921	----------	----------	----------	----------	566,590.63	439,976.51	10,000.00	80,192.07	541,000.31	1,637,759.52
1922	----------	----------	----------	----------	754,815.47	379,738.87	12,152.99	37,019.61	145,456.88	1,329,183.82
1923	----------	----------	----------	----------	1,287,060.51	430,346.07	18,749.01	68,751.67	147,979.87	1,952,887.13
1924	$60,000.00	96,877.15	----------	----------	2,146,590.15	590,839.98	56,377.99	78,092.07	120,622.72	3,149,400.06
1925	156,149.03	239,995.85	----------	----------	1,735,853.73	476,222.24	24,910.48	28,951.88	229,849.54	2,891,932.75
1926	230,389.73	71,357.72	----------	----------	930,747.40	427,708.82	55,614.02	28,299.26	40,632.64	1,784,749.59
1927	233,501.30	97,797.58	----------	----------	995,545.02	406,694.92	61,153.53	33,773.10	163,477.52	1,991,942.97
1928	259,731.32	109,749.02	----------	----------	1,040,934.23	282,282.20	18,874.57	33,991.50	113,635.12	1,859,197.96
1929	554,906.80	107,097.18	----------	----------	1,098,609.18	436,112.25	1,269.45	15,422.93	163,407.87	2,376,825.66
1930	674,711.02	147,493.81	$48,292.25	----------	1,120,686.76	132,679.31	----------	27,268.16	107,118.46	2,258,249.77
1931	375,063.05	92,994.22	36,173.50	----------	731,363.74	33,000.43	----------	12,369.41	250,939.51	1,531,903.86
1932	764,349.77	217,239.86	65,450.00	----------	2,763,866.69	8,250.00	10,975.85	22,094.40	305,737.14	4,157,963.71
1933	674,978.56	96,921.61	71,035.40	----------	2,581,635.94	19,690.79	----------	23,683.76	391,299.32	3,859,245.38
1934	804,597.15	110,668.49	148,101.72	----------	3,592,012.04	2,657.41	----------	17,097.69	46,347.96	4,721,482.46
1935	926,600.29	169,116.26	163,358.53	----------	3,749,304.38	23,893.99	----------	59,736.27	51,097.01	5,143,106.73
1936	1,085,290.55	165,888.94	221,223.92	----------	4,090,024.26	15,000.00	----------	18,144.68	14,039.12	5,609,611.47
1937	1,190,383.40	200,887.56	200,734.30	----------	3,337,643.98	56,669.73	----------	16,488.96	19,185.64	5,021,993.57
1938	1,282,599.60	158,500.25	201,699.83	----------	3,080,768.08	5,463.55	1,187.08	38,245.50	114,680.77	4,883,144.66
1939	1,320,501.96	166,349.35	218,745.42	----------	2,855,737.84	1,100.00	2,312.61	23,475.66	1,000.00	4,589,222.84
1940	1,509,892.75	189,169.18	258,811.45	----------	1,961,063.94	10,473.39	116.66	33,913.41	14,390.97	3,977,831.75
1941	1,670,551.63	227,953.06	306,011.90	----------	2,115,580.43	10,362.45	----------	25,763.04	10,859.87	4,367,082.38
1942	1,904,568.78	339,542.73	404,449.16	$67,614.00	1,951,591.21	----------	----------	24,217.03	1,030.96	4,693,013.87
1943	1,742,251.52	318,351.28	388,520.25	18,255.75	2,471,513.12	1,000.00	----------	32,948.03	----------	4,972,839.95
1944	1,402,385.58	337,817.90	451,407.43	61,393.51	1,793,789.88	800.00	----------	43,583.66	650.00	4,091,827.96
1945	1,301,771.95	309,583.98	400,386.91	47,886.79	782,606.81	----------	----------	32,928.12	167.53	2,875,332.09
1946	1,910,308.27	342,270.76	471,957.73	32,871.43	767,110.32	----------	----------	39,139.50	27.86	3,563,685.87
1947	2,401,528.61	413,148.51	540,648.69	59,670.25	3,204,712.30	5,833.83	----------	43,429.56	101.54	6,669,073.29
1948	2,609,593.15	422,736.42	635,471.44	44,154.35	2,761,376.93	----------	----------	67,672.48	142.66	6,541,147.43
1949	2,718,654.97	441,938.65	683,235.62	72,009.92	3,664,359.88	256,831.80	----------	190,141.47	11.59	8,027,183.90
1950	2,852,791.21	480,103.37	823,595.40	42,602.08	4,366,214.87	5,662.84	----------	74,072.37	1.20	8,645,043.34
1951	3,253,439.80	520,428.24	1,078,626.92	80,847.06	4,068,205.45	22,802.86	27,965.00	50,866.55	----------	9,103,181.88
1952	3,796,529.25	674,531.25	1,299,397.49	51,376.07	3,322,297.52	2,000.00	----------	164,897.83	----------	9,311,029.41
1953	4,441,443.73	785,304.57	1,540,429.31	81,458.00	5,684,340.61	----------	----------	138,764.61	101,538.74	12,773,279.57
1954	4,767,954.97	821,112.30	1,690,945.87	80,043.00	4,902,816.80	21,075.71	----------	72,473.95	----------	12,356,422.60
1955	5,219,432.56	570,582.36	1,712,509.89	91,186.00	5,021,089.95	----------	----------	48,319.74	60,220.21	12,723,340.71
1956	6,006,222.43	1,170,679.99	1,179,923.40	153,541.10	7,695,881.65	55,300.80	----------	87,506.20	----------	16,349,055.57
1957	6,304,461.57	1,227,950.75	2,061,899.98	159,268.35	9,757,664.98	----------	20,218.70	121,885.81	25,102.44	19,678,452.58
1958	6,132,067.75	1,247,071.25	2,018,974.12	164,785.10	14,529,839.93	----------	----------	119,354.25	----------	24,212,092.40
1959	6,914,873.98	1,331,587.23	2,197,890.34	180,558.15	15,180,895.55	36,216.28	----------	95,185.09	----------	25,937,206.62
1960	7,433,812.76	1,459,715.21	2,357,872.01	165,286.50	11,317,305.58	22,858.07	24,755.31	150,783.99	----------	22,932,389.43
Totals	$86,888,290.75	$15,975,432.94	$23,877,780.18	$1,654,807.41	$146,291,525.12	$4,933,738.65	$363,013.25	$2,374,172.01	$4,248,360.76	$286,607,121.07

ublicity and nformation	Special traffic studies	General administration	Total disbursements	Collection costs (From table 8)	Grand total
----------	----------	$10,774.00	$36,985.07	----------	$36,985.07
----------	----------	23,429.98	75,327.59	----------	75,327.59
----------	----------	38,222.73	592,118.68	$27,745.04	619,863.72
----------	----------	59,227.32	1,495,782.06	48,204.69	1,543,986.75
----------	----------	69,498.17	1,144,891.38	132,248.36	1,277,139.74
----------	----------	77,837.81	1,449,349.14	3,176.47	1,452,525.61
$2,159.75	$1,324.53	133,907.64	2,251,162.34	83,088.96	2,334,251.30
4,865.73	1,726.25	107,530.77	3,115,375.76	45,652.83	3,161,028.59
6,026.44	1,618.99	83,285.22	2,825,661.29	36,094.32	2,861,755.61
8,668.61	3,028.77	41,757.83	1,438,584.75	42,285.05	1,480,869.80
914.87	2,258.45	61,480.86	1,945,945.16	47,004.07	1,992,949.23
18.70	2,190.80	88,280.14	1,791,213.43	40,522.67	1,831,736.10
----------	3,683.26	58,490.02	2,184,191.97	30,794.54	2,214,986.51
----------	3,226.43	55,080.04	2,472,122.50	67,738.13	2,539,860.63
----------	48.55	32,488.81	1,483,856.18	44,608.19	1,528,464.37
----------	3,459.55	46,691.21	4,126,638.29	78,218.61	4,204,856.90
----------	3,450.84	43,686.26	3,656,536.20	71,067.72	3,727,603.92
----------	3,621.96	44,852.96	4,893,976.73	72,561.22	4,966,537.95
----------	3,460.77	56,532.28	4,822,219.74	141,815.66	4,964,035.40
----------	1,392.27	87,137.38	5,395,453.18	145,574.46	5,541,027.64
----------	5,777.99	108,450.02	5,333,683.48	182,136.99	5,515,820.47
618.78	422.31	138,646.42	4,439,252.86	171,141.95	4,610,394.81
3,013.40	6,306.86	119,011.61	4,367,342.46	158,867.25	4,526,209.71
4,070.90	7,226.54	134,699.57	3,591,333.69	187,923.79	3,779,257.48
7,507.92	7,444.55	137,348.50	4,287,077.07	221,896.51	4,508,973.58
8,121.60	8,024.24	136,061.43	4,105,944.79	305,915.60	4,411,860.39
3,872.94	10,028.96	132,417.04	3,628,911.28	407,063.32	4,035,974.60
2,948.71	9,736.48	137,213.81	3,109,074.60	311,786.91	3,420,861.51
2,645.75	10,154.42	135,853.31	2,142,170.68	284,169.51	2,426,340.19
1,972.73	10,671.52	157,096.91	3,021,063.12	300,268.19	3,321,331.31
2,924.78	12,584.63	209,795.53	7,297,857.82	348,724.26	7,646,582.08
5,696.33	15,255.98	231,809.34	6,831,837.46	418,888.77	7,250,726.23
4,706.27	16,087.04	208,564.40	7,720,096.66	588,381.01	8,308,477.67
9,376.30	10,257.63	215,859.70	8,320,671.76	414,773.81	8,735,445.57
19,411.22	10,346.83	233,053.07	8,390,101.20	439,755.39	8,829,856.59
18,693.07	10,172.60	287,284.33	8,374,929.86	701,872.00	9,076,801.86
9,558.09	11,625.86	287,603.61	10,737,772.71	676,481.11	11,414,253.82
4,644.32	13,374.21	300,972.69	11,385,090.18	926,080.82	12,311,171.00
9,173.49	16,443.91	342,408.31	12,393,817.89	811,302.99	13,205,120.88
8,525.94	17,889.34	320,553.46	14,809,333.30	1,055,921.85	15,865,255.15
9,089.18	21,865.10	421,610.86	18,200,965.81	1,024,076.62	19,225,042.43
24,384.80	24,114.74	580,511.29	23,559,279.05	1,394,939.38	24,954,218.43
15,702.61	23,979.89	521,599.89	25,612,982.70	1,098,156.14	26,711,138.84
21,850.77	24,825.76	593,146.16	19,217,171.09	1,871,828.49	21,088,999.58
221,164.00	$339,108.81	$7,311,762.69	$268,075,152.96	$15,460,753.65	$283,535,906.61

TABLE 3
COMPARATIVE BALANCE SHEETS
Fiscal Years 1959 and 1960

	June 30, 1959	June 30, 1960
Assets—		
Cash—		
State Controller	$951,887.73	$2,872,037.49
Cash in Banks	250,000.00	250,000.00
Deposits in escrow	185,000.00	205,410.00
	$1,386,887.73	$3,327,447.49
Receivables—		
Reimbursements receivable—Fed. Gov't.	$1,295,795.00	$1,044,750.00
Accounts receivable—general	46,437.56	75,648.59
	$1,342,232.56	$1,120,398.59
Stores inventory—		
District No. 1	$113,750.23	$113,472.73
District No. 3	27,669.39	51,810.39
District No. 4	27,430.51	37,757.87
District No. 5	31,627.37	32,684.23
Division No. 7 (equipment)	137,140.23	155,988.82
Division No. 8 (communications)	.....	8,786.92
Division No. 9 (headquarters)	25,171.93	22,261.55
	$362,789.66	$422,762.51
Buildings and nonhighway improvements	$4,487,695.00	$4,487,695.00
Equipment—Mobile	$2,294,505.31	$2,494,409.32
Less allowance for depreciation	437,459.98	481,519.76
	$1,857,045.33	$2,012,889.56
Furniture and fixtures	982,892.02	982,892.02
Estimated receipts	37,416,990.00	27,404,750.00
Total assets	$47,836,532.30	$39,758,835.17
Liabilities and reserves—		
Vouchers payable	$171,216.00	$184,472.30
Contracts payable	1,519,106.00	806,417.32
Reserve for investment (inventory and other assets)	8,127,881.99	7,666,861.34
Appropriations and surplus—		
Unalloted appropriations	.....	1,062,714.00
Allotments	37,416,990.00	26,342,036.00
Encumbrances	8,522,393.00	9,396,203.00
Reserve for encumbrances	—8,522,393.00	—9,396,203.00
Unappropriated surplus	601,338.31	3,696,334.21
Total liabilities, reserves, appropriations and surplus	$47,836,532.30	$39,758,835.17

TABLE 2

HISTORICAL RECORD—DISBURSEMENTS—1917–1960

Year	Preliminary engineering	State construction	Federal aid	General maintenance	Traffic and sign division	Reno plant equipment	Buildings	Highway publications	Road maps	Publicity and information	Special traffic studies	General administration	Total disbursements	Collection costs (From table 8)	Grand total
1917	$16,646.70	.....	.....	.....	.....	$8,873.99	.....	.....	$690.38	.....	.....	$10,774.00	$36,985.07	.....	$36,985.07
1918	19,427.92	.....	.....	$16,596.54	.....	15,788.10	.....	.....	85.05	.....	.....	23,429.98	75,327.59	.....	75,327.59
1919	48,328.95	$265,323.87	$125,570.65	29,330.21	.....	85,241.93	.....	.....	100.34	.....	.....	38,222.73	592,118.68	$27,745.04	619,863.72
1920	60,000.76	774,477.34	385,906.73	44,121.16	.....	171,122.35	.....	.....	926.40	.....	.....	59,227.32	1,495,782.06	48,204.69	1,543,986.75
1921	43,018.03	532,430.28	566,590.63	33,601.26	.....	—100,761.91	.....	$499.12	15.80	.....	.....	69,498.17	1,144,891.38	132,248.36	1,277,139.74
1922	98,959.03	441,952.42	754,815.47	61,997.55	.....	12,395.97	.....	1,390.89	.....	.....	.....	77,837.81	1,449,349.14	3,176.47	1,452,525.61
1923	114,561.55	618,334.47	1,287,060.51	110,724.87	.....	—18,573.76	.....	1,574.62	88.16	$2,159.75	$1,324.53	133,907.64	2,251,162.34	83,088.96	2,334,251.30
1924	64,194.80	552,471.46	2,146,590.15	122,788.60	.....	113,324.01	.....	1,650.74	233.25	4,865.73	1,726.25	107,530.77	3,115,375.76	45,652.83	3,161,028.59
1925	53,963.26	673,255.20	1,735,853.73	240,070.46	.....	28,270.31	.....	2,910.53	407.15	6,026.44	1,618.99	83,285.22	2,825,661.29	36,094.32	2,861,755.61
1926	59,671.88	71,501.88	930,747.40	320,764.14	.....	—73.84	.....	2,180.08	338.00	8,668.61	3,028.77	41,757.83	1,438,584.75	42,285.05	1,480,869.80
1927	53,586.22	485,114.75	995,545.02	368,992.90	.....	—22,423.39	.....	326.83	148.65	914.87	2,258.45	61,480.86	1,945,945.16	47,004.07	1,992,949.23
1928	63,150.77	221,789.59	1,040,934.23	378,685.00	.....	—3,938.23	.....	.....	102.43	18.70	2,190.80	88,280.14	1,791,213.43	40,522.67	1,831,736.10
1929	60,039.92	466,733.32	1,098,609.18	436,035.53	.....	60,450.51	.....	.....	150.23	.....	3,683.26	58,490.02	2,184,191.97	30,794.54	2,214,986.51
1930	87,490.48	615,032.29	1,120,686.76	503,899.15	.....	86,548.23	.....	.....	159.12	.....	3,226.43	55,080.04	2,472,122.50	67,738.13	2,539,860.63
1931	83,759.01	299,277.20	731,363.74	307,839.50	.....	28,886.65	.....	.....	192.72	.....	48.55	32,488.81	1,483,856.18	44,608.19	1,528,464.37
1932	166,332.59	510,614.02	2,763,866.69	618,377.41	.....	16,904.58	.....	.....	392.24	.....	3,459.55	46,691.21	4,126,638.29	78,218.61	4,204,856.90
1933	119,796.10	377,015.08	2,581,635.94	566,845.41	.....	—36,133.88	.....	.....	240.45	.....	3,450.84	43,686.26	3,656,536.20	71,067.72	3,727,603.92
1934	140,176.38	574,906.16	3,592,012.04	502,715.66	.....	35,244.51	.....	.....	447.06	.....	3,621.96	44,852.96	4,893,976.73	72,561.22	4,966,537.95
1935	200,505.03	206,735.45	3,749,304.38	617,784.47	.....	—12,537.37	.....	.....	434.73	.....	3,460.77	56,532.28	4,822,219.74	141,815.66	4,964,035.40
1936	220,140.19	282,927.72	4,090,024.26	675,726.06	.....	36,241.67	.....	1,527.53	336.10	.....	1,392.27	87,137.38	5,395,453.18	145,574.46	5,541,027.64
1937	247,986.84	513,777.34	3,337,643.98	846,033.35	.....	246,942.54	$21,642.18	4,076.14	1,353.10	.....	5,777.99	108,450.02	5,333,683.48	182,136.99	5,515,820.47
1938	207,372.40	215,118.91	3,080,768.08	756,305.26	.....	30,193.15	.....	5,951.50	3,856.05	618.78	422.31	138,646.42	4,439,252.86	171,141.95	4,610,394.81
1939	210,318.11	308,980.06	2,855,737.84	836,391.37	$3,776.76	10,606.53	.....	10,735.70	2,464.22	3,013.40	6,306.86	119,011.61	4,367,342.46	158,867.25	4,526,209.71
1940	230,311.01	373,526.48	1,961,063.94	768,822.28	11,398.25	85,618.64	.....	11,118.51	3,477.57	4,070.90	7,226.54	134,699.57	3,591,333.69	187,923.79	3,779,257.48
1941	234,576.06	651,045.97	2,115,580.43	779,833.39	23,881.16	288,423.60	34,563.98	4,151.38	2,720.13	7,507.92	7,444.55	137,348.50	4,287,077.07	221,896.51	4,508,973.58
1942	284,696.12	420,374.35	1,951,591.21	851,607.37	101,511.29	294,341.32	45,839.64	.....	3,776.22	8,121.60	8,024.24	136,061.43	4,105,944.79	305,915.60	4,411,860.39
1943	99,602.88	198,911.55	2,471,513.12	745,483.00	60,572.95	—117,209.93	23,717.87	.....	.90	3,872.94	10,028.96	132,417.04	3,628,911.28	407,063.32	4,035,974.60
1944	86,396.91	312,817.94	1,793,789.88	703,625.27	49,796.82	—1,104.79	13,853.57	.....	.....	2,948.71	9,736.48	137,213.81	3,109,074.60	311,786.91	3,420,861.51
1945	77,989.62	169,221.14	782,606.81	773,827.80	52,388.71	130,384.29	7,098.83	.....	.....	2,645.75	10,154.42	135,853.31	2,142,170.68	284,169.51	2,426,340.19
1946	155,458.84	684,509.81	767,110.32	855,366.78	55,969.67	256,993.77	66,859.67	5,013.89	4,039.21	1,972.73	10,671.52	157,096.91	3,021,063.12	300,268.19	3,321,331.31
1947	273,327.10	1,679,781.89	3,204,712.30	1,051,426.35	72,422.82	750,334.07	29,106.56	11,238.45	203.34	2,924.78	12,584.63	209,795.53	7,297,857.82	348,724.26	7,646,582.08
1948	351,039.58	1,837,296.09	2,761,376.93	1,195,746.18	65,055.77	302,514.20	43,344.30	22,702.76	.....	5,696.33	15,255.98	231,809.34	6,831,837.46	418,888.77	7,250,726.23
1949	480,644.26	1,393,520.06	3,664,359.88	1,299,520.66	153,760.34	361,827.12	100,940.58	29,382.99	6,783.06	4,706.27	16,087.04	208,564.40	7,720,096.66	588,381.01	8,308,477.67
1950	515,800.03	1,281,327.44	4,366,214.87	1,264,302.53	205,176.53	246,466.25	158,572.45	39,434.20	7,883.83	9,376.30	10,257.63	215,859.70	8,320,671.76	414,773.81	8,735,445.57
1951	470,008.53	1,396,214.56	4,068,205.45	1,421,292.66	199,004.45	279,713.04	251,657.23	30,107.60	11,086.56	19,411.22	10,346.83	233,053.07	8,390,101.20	439,755.39	8,829,856.59
1952	625,212.56	1,605,641.02	3,322,297.52	2,076,882.61	179,291.78	65,788.37	138,076.93	34,746.24	10,842.83	18,693.07	10,172.60	287,284.33	8,374,929.86	701,872.00	9,076,801.86
1953	580,736.02	1,478,321.36	5,684,340.61	1,909,382.22	249,070.54	203.722.26	274,392.25	35,831.88	13,188.01	9,558.09	11,625.86	287,603.61	10,737,772.71	676,481.11	11,414,253.82
1954	949,768.77	2,116,775.97	4,902,816.80	2,220,343.87	294,995.08	30,383.25	508,380.99	27,659.81	14,974.42	4,644.32	13,374.21	300,972.69	11,385,090.18	926,080.82	12,311,171.00
1955	1,009,267.06	2,920,129.07	5,021,089.95	2,150,006.15	257,821.89	233,683.79	380,029.89	37,997.48	15,766.90	9,173.49	16,443.91	342,408.31	12,393,817.89	811,302.99	13,205,120.88
1956	1,195,953.78	1,780,897.90	7,695,881.65	2,463,242.60	296,460.30	406,769.96	561,909.48	43,702.24	17,546.65	8,525.94	17,889.34	320,553.46	14,809,333.30	1,055,921.85	15,865,255.15
1957	1,610,407.80	2,170,921.84	9,757,664.98	2,406,218.68	362,128.38	327,268.61	548,556.67	23,440.09	1,793.62	9,089.18	21,865.10	421,610.86	18,200,965.81	1,024,076.62	19,225,042.43
1958	2,000,805.75	2,136,105.74	14,529,839.93	2,935,831.66	374,582.94	433,157.09	427,327.05	56,649.69	35,968.37	24,384.80	24,114.74	580,511.29	23,559,279.05	1,394,939.38	24,954,218.43
1959	980,539.73	4,834,435.05	15,180,895.55	3,046,905.71	415,684.43	456,547.95	64,205.99	46,770.31	25,715.59	15,702.61	23,979.89	521,599.89	25,612,982.70	1,098,156.14	26,711,138.84
1960	888,750.17	1,948,071.17	11,317,305.58	3,432,798.73	547,365.04	241,386.44	133,628.84	44,489.10	23,553.33	21,850.77	24,825.76	593,146.16	19,217,171.09	1,871,828.49	21,088,999.58
Totals	$15,540,719.50	$40,937,615.21	$146,291,525.12	$42,748,092.36	$4,032,115.90	$6,069,601.95	$3,833,704.95	$537,260.30	$212,482.17	$221,164.00	$339,108.81	$7,311,762.69	$268,075,152.96	$15,460,753.65	$283,535,906.61

TABLE 3
COMPARATIVE BALANCE SHEETS
Fiscal Years 1959 and 1960

	June 30, 1959	June 30, 1960
Assets—		
Cash—		
State Controller	$951,887.73	$2,872,037.49
Cash in Banks	250,000.00	250,000.00
Deposits in escrow	185,000.00	205,410.00
	$1,386,887.73	$3,327,447.49
Receivables—		
Reimbursements receivable—Fed. Gov't.	$1,295,795.00	$1,044,750.00
Accounts receivable—general	46,437.56	75,648.59
	$1,342,232.56	$1,120,398.59
Stores inventory—		
District No. 1	$113,750.23	$113,472.73
District No. 3	27,669.39	51,810.39
District No. 4	27,430.51	37,757.87
District No. 5	31,627.37	32,684.23
Division No. 7 (equipment)	137,140.23	155,988.82
Division No. 8 (communications)	————	8,786.92
Division No. 9 (headquarters)	25,171.93	22,261.55
	$362,789.66	$422,762.51
Buildings and nonhighway improvements	$4,487,695.00	$4,487,695.00
Equipment—Mobile	$2,294,505.31	$2,494,409.32
Less allowance for depreciation	437,459.98	481,519.76
	$1,857,045.33	$2,012,889.56
Furniture and fixtures	982,892.02	982,892.02
Estimated receipts	37,416,990.00	27,404,750.00
Total assets	$47,836,532.30	$39,758,835.17
Liabilities and reserves—		
Vouchers payable	$171,216.00	$184,472.30
Contracts payable	1,519,106.00	806,417.32
Reserve for investment (inventory and other assets)	8,127,881.99	7,666,861.34
Appropriations and surplus—		
Unalloted appropriations	————	1,062,714.00
Allotments	37,416,990.00	26,342,036.00
Encumbrances	8,522,393.00	9,396,203.00
Reserve for encumbrances	—8,522,393.00	—9,396,203.00
Unappropriated surplus	601,338.31	3,696,334.21
Total liabilities, reserves, appropriations and surplus	$47,836.532.30	$39,758,835.17

TABLE 4

STATEMENT OF REVENUES AND DISBURSEMENTS—1959–1960

Item	1959	1960	Total	Percent
Receipts—				
Federal aid	$15,180,895.55	$11,317,305.58	$26,498,201.13	54.23
Gas, use fuel tax (gross)	6,914,873.98	7,433,812.76	14,348,686.74	29.36
Auto license fees	1,331,587.23	1,459,715.21	2,791,302.44	5.71
Common carrier licenses, fees	2,197,890.34	2,357,872.01	4,555,762.35	9.32
Drivers' licenses	180,558.15	165,286.50	345,844.65	.71
Participation by others	36,216.28	47,613.38	83,829.66	.17
Accounts receivable	95,185.09	150,783.99	245,969.08	.50
	$25,937,206.62	$22,932,389.43	$48,869,596.05	100.00
Disbursements—				
Construction	$18,297,360.58	$10,881,911.84	$29,179,272.42	61.04
Surveys, plans, R/W	2,257,952.38	2,766,358.10	5,024,310.48	10.51
Maintenance	3,462,590.14	3,980,163.77	7,442,753.91	15,57
Buildings	64,205.99	133,628.84	197,834.83	.42
Equip., equip. plant	456,547.95	241,386.44	697,934.39	1.46
Administration	521,599.89	593,146.16	1,114,746.05	2.33
Research, investigation	440,557.37	505,856.98	946,414.35	1.98
Public relations	15,702.61	21,850.77	37,553.38	.08
Highways and Parks magazine	46,770.31	44,489.10	91,259.41	.19
State road maps	25,715.59	23,553.33	49,268.92	.10
Traffic studies	23,979.89	24,825.76	48,805.65	.10
Accounts receivable	129,858.16	220,683.69	350,541.85	.73
Gasoline and use fuel tax refunds	228,796.03	236,836.65	465,632.68	.98
Gasoline and use fuel tax administration	46,374.52	18,261.07	64,635.59	.14
Common carrier licenses, refunds	4,159.30	16,978.94	21,138.24	.04
Public Service Commission	----	20,561.00	20,561.00	.04
Dept. of Motor Vehicles	6,073.00	90,431.21	96,504.21	.20
Motor Vehicle Division	153.213.00	256,234.25	409,447.25	.86
Motor Carrier Division	33,365.00	65,394.56	98,759.56	.21
Highway Patrol Division	366,315.13	600,231.14	966,546.27	2.02
Drivers' License Division	130,002.00	190,313.98	320,315.98	.67
Fiscal, Accounting Div.	----	155,902.00	155,902.00	.33
Automation Division	----	----	----	----
	$26,711,138.84	$21,088,999.58	$47,800,138.42	100.00

Reconciliation with State Controller—	
Highway Balance, July 1, 1958	$1,767,967.18
Plus: Receipts	48,869,596.05
Less: Disbursements	—47,800,138.42
Highway Balance, June 30, 1960	$2,837,424.81
Plus: June 1960 lists included in above paid in July 1960 by State Controller	9,355.82
Plus: Credits distributed in July 1960	25,256.86
Plus: Controller's transfers received in July 1960	842,301.36
State Controller's balance, June 30, 1960	$3,714,338.85

Note: Highway Revolving Fund—$250,000 by Legislative Authority.

CHART 1

FEDERAL - AID AND STATE REVENUES
BY FISCAL YEARS 1917 - 1960

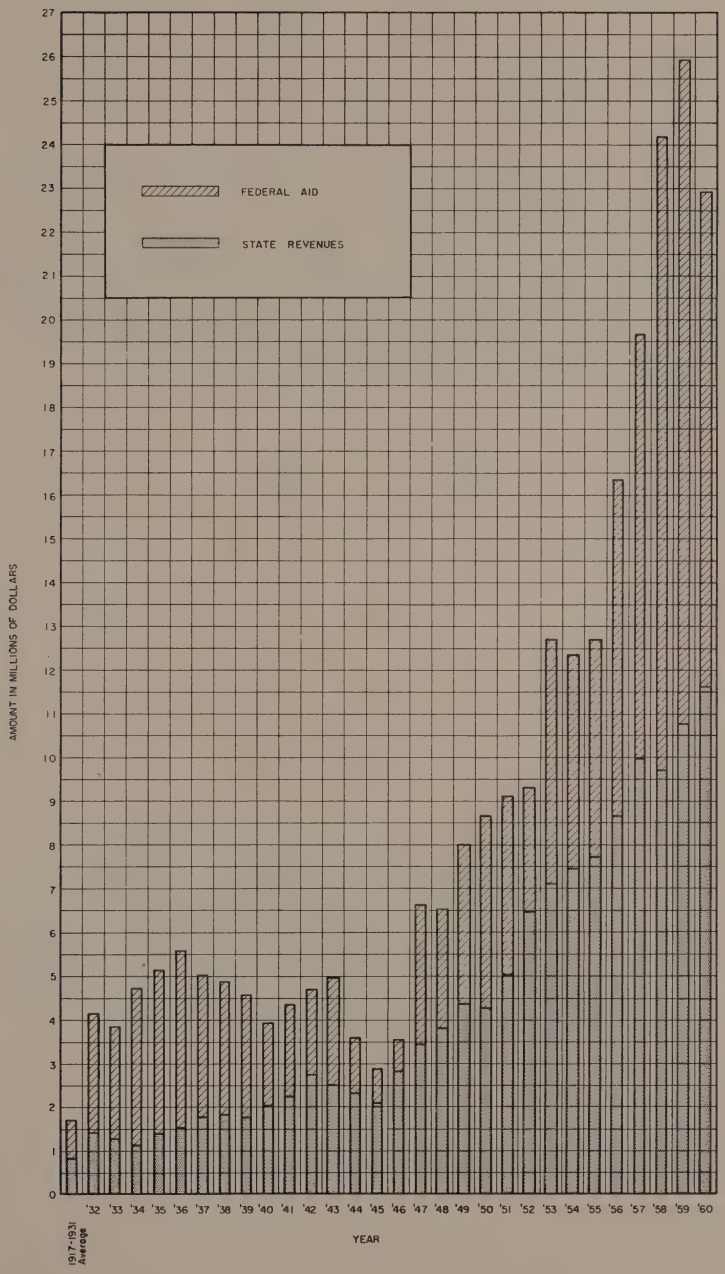
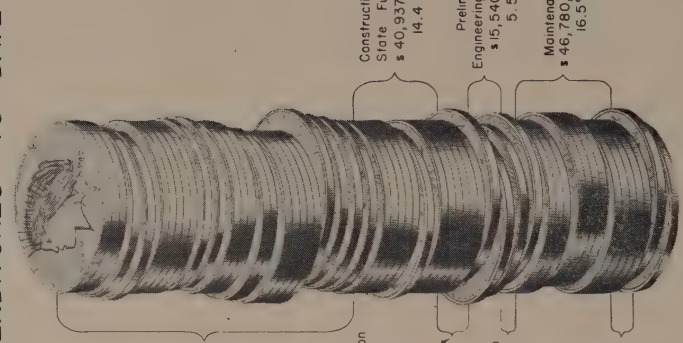


CHART 2


EXPENDITURES TO DATE
Construction – Federal Funds $146,291,525 51.6 %
User Fee Collection Costs, Refunds, Transfers, Etc. $15,460,754 5.4 %
General Administration $7,311,763 2.6 %
Other Expenditures $11,213,322 4.0 %
Construction – State Funds $40,937,615 14.4 %
Preliminary Engineering and R/W $15,540,720 5.5 %
Maintenance $46,780,208 16.5 %

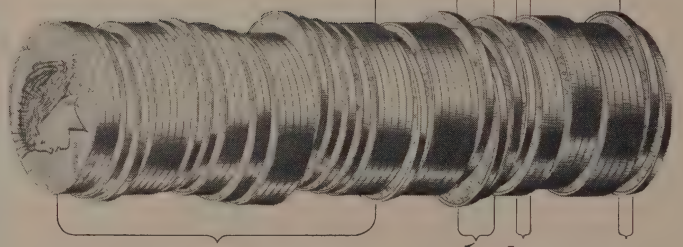

EXPENDITURES 1958-1960
Construction – Federal Funds $26,498,201 55.4 %
User Fee Collection Costs, Refunds, Transfers, Etc. $2,969,985 6.2 %
General Administration $1,114,746 2.3 %
Other Expenditures $1,122,657 2.4 %
Construction – State Funds $6,782,506 14.2 %
Preliminary Engineering and R/W $1,869,290 3.9 %
Maintenance $7,442,754 15.6 %

CHART 3

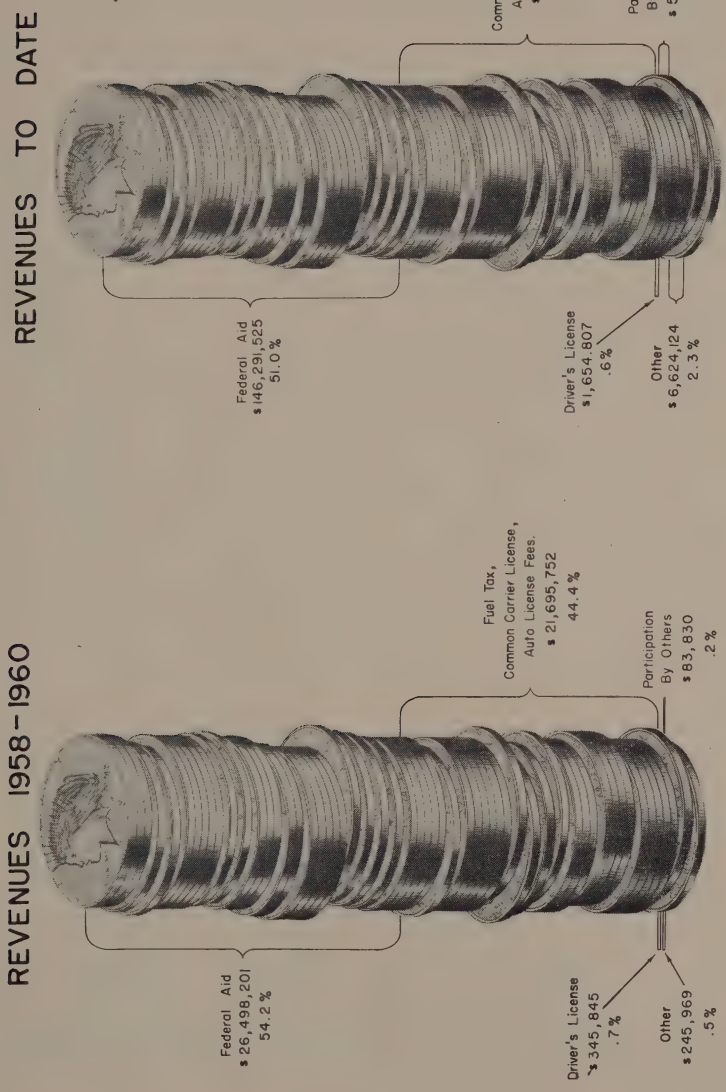

REVENUES 1958-1960
Federal Aid
$26,498,201
54.2%
Fuel Tax,
Common Carrier License,
Auto License Fees.
$21,695,752
44.4%
Driver's License
$345,845
.7%
Participation
By Others
$83,830
.2%
Other
$245,969
.5%
REVENUES TO DATE
Federal Aid
$146,291,525
51.0%
Fuel Tax,
Common Carrier License,
Auto License Fees.
$126,741,504
44.2%
Driver's License
$1,654,807
.6%
Participation
By Others
$5,295,161
1.9%
Other
$6,624,124
2.3%

CHART 4

YEARLY EXPENDITURES BY FISCAL YEARS 1917-1960

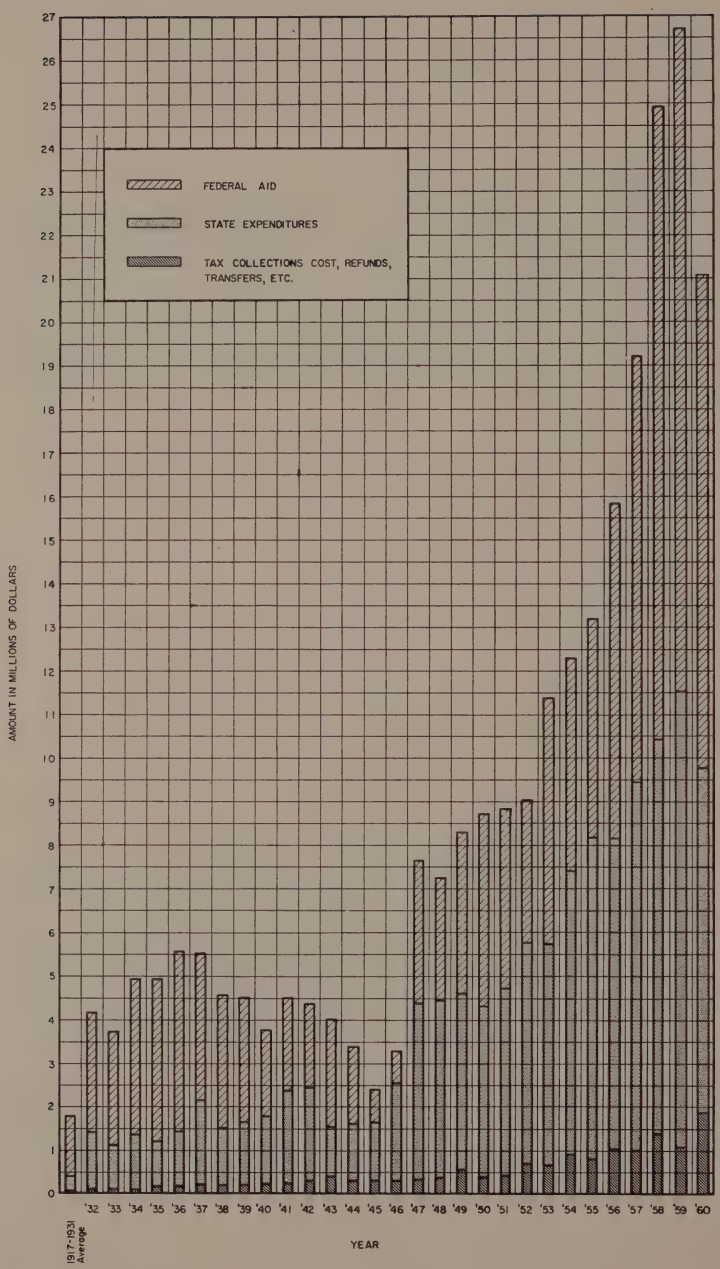
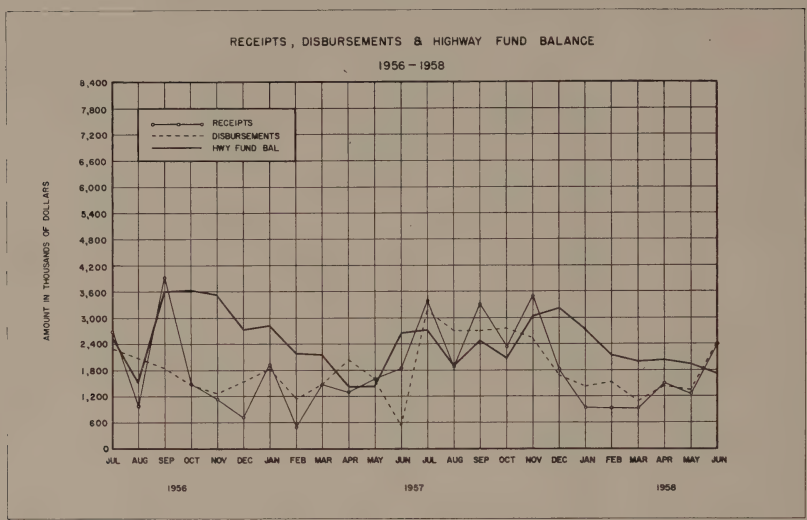


TABLE 5
STATUS OF STATE HIGHWAY FUND

	Vouchered amount not paid	Highway balance	Total estimated fund balance	Controller's balance
1958				
January 31	$374,298.34	$2,754,659.03	$3,128,957.37	$2,829,008.48
February 28	413,089.28	2,165,853.68	2,578,942.96	2,350,240.98
March 31	648,075.10	1,994,441.30	2,642,516.40	2,038,008.14
April 30	653,998.60	2,063,333.05	2,717,331.65	2,254,764.32
May 31	533,548.89	1,964,244.70	2,497,793.59	2,164,453.69
June 30	230,107.19	1,767,967.18	1,998,074.37	1,851,615.46
July 31	456,536.19	2,114,224.27	2,570,760.46	2,229,116.46
August 31	396,121.19	2,232,912.38	2,629,033.57	2,248,575.42
September 30	520,325.19	1,583,746.53	2,104,071.72	2,078,817.42
October 31	520,325.19	1,935,766.20	2,456,091.39	1,931,250.92
November 30	1,688,942.19	284,139.77	1,973,081.96	524,272.65
December 31	842,102.19	2,727,934.07	3,570,036.26	2,793,833.86
1959				
January 31	$1,506,113.19	$1,497,666.03	$3,003,779.22	$1,768,595.50
February 28	377,602.19	2,361,398.85	2,739,001.04	2,429,220.69
March 31	501,936.00	2,327,216.45	2,829,152.45	2,576,293.05
April 30	438,560.00	2,164,284.67	2,602,844.67	2,230,799.87
May 31	277,037.00	2,071,525.03	2,348,562.03	2,104.212.04
June 30	1,337,913.00	994,034.96	2,331,947.96	951,887.73
July 31	136,593.00	1,711,658.51	1,848,251.51	1,844,768.88
August 31	1,274,412.25	2,321,050.74	3,595,462.99	2,521,460.49
September 30	1,837,338.25	1,475,608.71	3,312,946.96	2,034,466.24
October 31	2,104,329.25	1,520,208.17	3,624,537.42	1,630,846.68
November 30	1,242,278.25	2,048,590.09	3,290,868.34	2,140,853.72
December 31	1,085,523.00	2,579,196.67	3,664,719.67	2,582,173.77
1960				
January 31	$1,218,229.00	$2,547,288.94	$3,765,517.94	$2,684,934.43
February 29	789,419.00	2,488,205.94	3,277,624.94	2,742,718.16
March 31	675,363.00	2,476,780.24	3,152,143.24	2,802,238.11
April 30	870,836.00	2,506.861.89	3,377,697.89	2,723,745.10
May 31	750,254.00	2,836,038.81	3,586,292.81	2,886,129.32
June 30	1,044,750.00	*2,862,681.67	3,907,431.67	2,872,037.49

*Includes $25,256.86 July 1960 credits.

CHART 5


RECEIPTS, DISBURSEMENTS & HIGHWAY FUND BALANCE
1956 – 1958
RECEIPTS
DISBURSEMENTS
HWY FUND BAL
AMOUNT IN THOUSANDS OF DOLLARS
8,400
7,800
7,200
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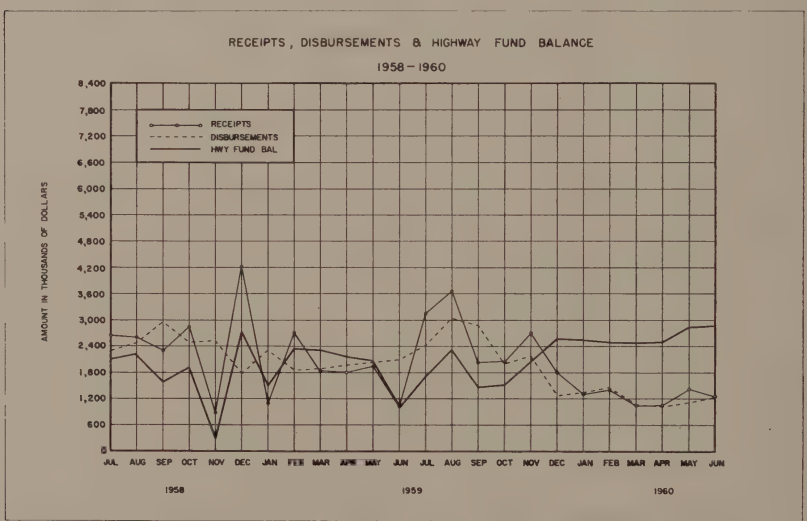
RECEIPTS, DISBURSEMENTS & HIGHWAY FUND BALANCE
1958 – 1960
RECEIPTS
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HWY FUND BAL
AMOUNT IN THOUSANDS OF DOLLARS
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TABLE 6
NEVADA'S SHARE OF FEDERAL AID ALLOTMENTS
1917–1951

Regular	$41,694,719.63
Secondary	10,650,758.00
Urban	288,768.00
Public Lands	4,204,149.00
Emergency	1,575,756.00
National Recovery	6,848,273.00
Advance	904,961.83
Advance Engineering	127,539.00
Strategic Net	318,847.00
Works Program—	
Highway	2,243,074.00
Grade Crossing Elimination	1,137,260.00
Grade Crossings	683,639.00
Subtotal	$70,677,744.46
1952 Regular	$2,885,661.00
1952 Secondary Highways	1,928,291.00
1952 Urban	92,917.00
1953 Regular	2,863,524.00
1953 Secondary Highways	1,913,466.00
1953 Urban	92,199.00
1954 Regular	3,174,465.00
1954 Secondary Highways	2,121,392.00
1954 Urban	102,203.00
1954 Federal Lands	400,000.00
1954 Interstate	322,835.00
1955 Regular	3,179,310.00
1955 Secondary Highways	2,124,823.00
1955 Urban	102,729.00
1955 Interstate	323,336.00
1956 Regular	4,077,521.00
1956 Secondary Highways	2,725,122.00
1956 Urban	131,752.00
1956 Interstate	1,785,146.00
1956 Federal Lands	395,058.32
1957 Regular	4,067,717.00
1957 Regular	706,600.00
1957 Secondary Highways	2,718,588.00
1957 Secondary Highways	472,305.00
1957 Urban	132,088.00
1957 Urban	23,939.00
1957 Interstate	1,784,039.00
1957 Interstate	10,440,057.00
1958 Regular	4,804,877.00
1958 Secondary Highways	3,211,672.00
1958 Urban	162,785.00
1958 Interstate	17,748,097.00
1959 Regular	4,909,104.00
1959 Secondary Highways	3,281,450.00
1959 Urban	166,734.00
1959 Interstate	20,744,054.00
1959 Interstate	2,084,830.00
1959 D-Fund	3,839,673.00
1960 Regular	5,061,574.00
1960 Secondary Highways	3,383,408.00
1960 Urban	171,498.00
1960 Interstate	13,009,625.00
1961 Regular	4,519,154.00
1961 Secondary Highways	3,096,583.00
1961 Urban	175,376.00
1961 Interstate	9,319,860.00
1962 Regular	3,397,528.00
1962 Secondary Highways	2,346,127.00
1962 Urban	131,532.00
1962 Interstate	11,326,219.00
Subtotal 1917–1962	$238,656,587.78
Other Federal Funds Utilized—	
Defense Act Access Funds	$1,958,757.90
Postwar Access Funds	692,811.90
Flight Strips (Special)	637,513.04
Flight Strips (Regular)	569,452.02
Subtotal	$3,858,534.86
Grand total	$242,515,122.64

TABLE 7

ESTIMATE OF ANTICIPATED REVENUES AVAILABLE FOR HIGHWAY USE FOR 1961 AND 1962 COMPARED TO ACTUAL REVENUES OF 1959–1960

Item	Actual 1959	Actual 1969	Estimated 1961	Estimated 1962
Motor vehicle fuel tax	$6,914,873.98	$7,433,812.76	$8,000,000.00	$8,485,000.00
Auto license fees	1,331,587.23	1,459,715.21	1,650,000.00	1,725,000.00
Common carrier licenses	2,197,890.34	2,357,872.01	2,750,000.00	2,780,000.00
Driver's license fees	180,558.15	165,286.50	190,000.00	215,000.00
Federal aid	15,180,895.55	11,317,305.58	16,350,000.00	18,780,000.00
Miscellaneous	131,401.37	198,397.37	210,000.00	225,000.00
Totals	$25,937,206.62	$22,932,389.43	$29,150,000.00	$32,210,000.00

TABLE 8

ESTIMATE OF PROPOSED EXPENDITURES FOR 1961 AND 1962 FISCAL YEARS COMPARED TO ACTUAL EXPENDITURES FOR 1959–1960

Item	Actual 1959	Actual 1960	Estimated 1961	Estimated 1962
FEDERAL				
Right-of-way	$56,254.00	$313,573.00	$1,675,000.00	$3,020,000.00
Preliminary engineering	760,069.00	856,527.00	1,055,000.00	1,375,000.00
Construction engineering	826,467.00	791,943.09	1,198,000.00	1,125,000.00
Construction	13,219,247.55	9,107,345.49	12,110,000.00	12,825,000.00
Research and investigation	318,858.00	247,917.00	312,000.00	435,000.00
Subtotals	$15,180,895.55	$11,317,305.58	$16,350,000.00	$18,780,000.00
STATE				
Right-of-way	$461,089.65	$958,385.72	$1,338,000.00	$430,000.00
Preliminary engineering	980,539.73	637,872.38	703,000.00	480,000.00
Construction engineering	800,546.85	355,660.19	352,000.00	625,000.00
Construction	3,451,099.18	626,963.07	4,112,483.00	4,285,000.00
Research and investigation	121,699.37	257,939.98	251,000.00	140,000.00
Special traffic studies	23,979.89	24,825.76	25,000.00	27,500.00
General maintenance	3,462,590.14	3,980,163.77	4,000,000.00	4,160,000.00
Maintenance building	64,205.99	133,628.84	184,000.00	197,500.00
Reno plant and equipment	456,547.95	241,386.44	141,000.00	175,000.00
General administration	521,599.89	593,146.16	650,000.00	675,000.00
Public relations	15,702.61	21,850.77	25,000.00	25,000.00
Official road map	25,715.59	23,553.33	25,000.00	25,000.00
Highways and Parks magazine	46,770.31	44,489.10	50,000.00	50,000.00
Dept. of Motor Vehicles	6,073.00	90,431.21	40,398.00	50,000.00
Motor Vehicle Division	153,213.00	256,234.25	238,467.00	250,000.00
Motor Carrier Division	33,365.00	65,394.56	118,469.00	120,000.00
Drivers' License Division	130,002.00	190,313.98	194,428.00	200,000.00
Fiscal and Accounting Division	----------	155,902.00	129,269.00	130,000.00
Highway Patrol	366,315.13	600,231.14	695,583.00	725,000.00
Automation Division	-	-	112,134.00	115,000.00
Gas and use fuel admin.	46,374.52	18,261.07	26,295.00	35,000.00
Public Service Comm.	----------	20,561.00	20,000.00	25,000.00
Gas, use fuel, carrier refunds	232,955.33	253,815.59	280,000.00	300,000.00
Accounts receivable	129,858.16	220,683.69	175,000.00	175,000.00
Subtotals	$11,530,243.29	$9,771,694.00	$13,886,526.00	$13,420,000.00
Totals—all funds	$26,711,138.84	$21,088,999.58	$30,236,526.00	$32,200,000.00

7–1960

Year	ellaneous	Totals	Disbursements (From table 2)	Grand totals
1917			$36,985.07	$36,985.07
1918			75,327.59	75,327.59
1919	629.46	$27,745.04	592,118.68	619,863.72
1920		48,204.69	1,495,782.06	1,543,986.75
1921	,946.89	132,248.36	1,144,891.38	1,277,139.74
1922	,530.82	3,176.47	1,449,349.14	1,452,525.61
1923		83,088.96	2,251,162.34	2,334,251.30
1924		45,652.83	3,115,375.76	3,161,028.59
1925		36,094.32	2,825,661.29	2,861,755.61
1926		42,285.05	1,438,584.75	1,480,869.80
1927		47,004.07	1,945,945.16	1,992,949.23
1928		40,522.67	1,791,213.43	1,831,736.10
1929		30,794.54	2,184,191.97	2,214,986.51
1930	,721.65	67,738.13	2,472,122.50	2,539,860.63
1931	,912.50	44,608.19	1,483,856.18	1,528,464.37
1932	,551.25	78,218.61	4,126,638.29	4,204,856.90
1933	,600.00	71,067.72	3,656,536.20	3,727,603.92
1934	,178.75	72,561.22	4,893,976.73	4,966,537.95
1935	,857.50	141,815.66	4,822,219.74	4,964,035.40
1936	,378.50	145,574.46	5,395,453.18	5,541,027.64
1937	,902.75	182,136.99	5,333,683.48	5,515,820.47
1938	,793.75	171,141.95	4,439,252.86	4,610,394.81
1939	,305.02	158,867.25	4,367,342.46	4,526,209.71
1940	,966.34	187,923.79	3,591,333.69	3,779,257.48
1941		221,896.51	4,287,077.07	4,508,973.58
1942		305,915.60	4,105,944.79	4,411,860.39
1943		407,063.32	3,628,911.28	4,035,974.60
1944		311,786.91	3,109,074.60	3,420,861.51
1945		284,169.51	2,142,170.68	2,426,340.19
1946		300,268.19	3,021,063.12	3,321,331.31
1947		348,724.26	7,297,857.82	7,646,582.08
1948		418,888.77	6,831,837.46	7,250,726.23
1949		588,381.01	7,720,096.66	8,308,477.67
1950		414,773.81	8,320,671.76	8,735,445.57
1951		439,755.39	8,390,101.20	8,829,856.59
1952		701,872.00	8,374,929.86	9,076,801.86
1953		676,481.11	10,737,772.71	11,414,253.82
1954		926,080.82	11,385,090.18	12,311,171.00
1955		811,302.99	12,393,817.89	13,205,120.88
1956		1,055,921.85	14,809,333.30	15,865,255.15
1957		1,024,076.62	18,200,965.81	19,225,042.43
1958		1,394,939.38	23,559,279.05	24,954,218.43
1959		1,098,156.14	25,612,982.70	26,711,138.84
1960		1,871,828.49	19,217,171.09	21,088,999.58
Totals	275.18	$15,460,753.65	$268,075,152.96	$283,535,906.61

TABLE 7

ESTIMATE OF ANTICIPATED REVENUES AVAILABLE FOR HIGHWAY USE FOR 1961 AND 1962 COMPARED TO ACTUAL REVENUES OF 1959–1960

Item	Actual 1959	Actual 1969	Estimated 1961	Estimated 1962
Motor vehicle fuel tax	$6,914,873.98	$7,433,812.76	$8,000,000.00	$8,485,000.00
Auto license fees	1,331,587.23	1,459,715.21	1,650,000.00	1,725,000.00
Common carrier licenses	2,197,890.34	2,357,872.01	2,750,000.00	2,780,000.00
Driver's license fees	180,558.15	165,286.50	190,000.00	215,000.00
Federal aid	15,180,895.55	11,317,305.58	16,350,000.00	18,780,000.00
Miscellaneous	131,401.37	198,397.37	210,000.00	225,000.00
Totals	$25,937,206.62	$22,932,389.43	$29,150,000.00	$32,210,000.00

TABLE 8

ESTIMATE OF PROPOSED EXPENDITURES FOR 1961 AND 1962 FISCAL YEARS COMPARED TO ACTUAL EXPENDITURES FOR 1959–1960

Item	Actual 1959	Actual 1960	Estimated 1961	Estimated 1962
FEDERAL				
Right-of-way	$56,254.00	$313,573.00	$1,675,000.00	$3,020,000.00
Preliminary engineering	760,069.00	856,527.00	1,055,000.00	1,375,000.00
Construction engineering	826,467.00	791,943.09	1,198,000.00	1,125,000.00
Construction	13,219,247.55	9,107,345.49	12,110,000.00	12,825,000.00
Research and investigation	318,858.00	247,917.00	312,000.00	435,000.00
Subtotals	$15,180,895.55	$11,317,305.58	$16,350,000.00	$18,780,000.00
STATE				
Right-of-way	$461,089.65	$958,385.72	$1,338,000.00	$430,000.00
Preliminary engineering	980,539.73	637,872.38	703,000.00	480,000.00
Construction engineering	800,546.85	355,660.19	352,000.00	625,000.00
Construction	3,451,099.18	626,963.07	4,112,483.00	4,285,000.00
Research and investigation	121,699.37	257,939.98	251,000.00	140,000.00
Special traffic studies	23,979.89	24,825.76	25,000.00	27,500.00
General maintenance	3,462,590.14	3,980,163.77	4,000,000.00	4,160,000.00
Maintenance building	64,205.99	133,628.84	184,000.00	197,500.00
Reno plant and equipment	456,547.95	241,386.44	141,000.00	175,000.00
General administration	521,599.89	593,146.16	650,000.00	675,000.00
Public relations	15,702.61	21,850.77	25,000.00	25,000.00
Official road map	25,715.59	23,553.33	25,000.00	25,000.00
Highways and Parks magazine	46,770.31	44,489.10	50,000.00	50,000.00
Dept. of Motor Vehicles	6,073.00	90,431.21	40,398.00	50,000.00
Motor Vehicle Division	153,213.00	256,234.25	238,467.00	250,000.00
Motor Carrier Division	33,365.00	65,394.56	118,469.00	120,000.00
Drivers' License Division	130,002.00	190,313.98	194,428.00	200,000.00
Fiscal and Accounting Division	----------	155,902.00	129,269.00	130,000.00
Highway Patrol	366,315.13	600,231.14	695,583.00	725,000.00
Automation Division	----------	----------	112,134.00	115,000.00
Gas and use fuel admin.	46,374.52	18,261.07	26,295.00	35,000.00
Public Service Comm.	----------	20,561.00	20,000.00	25,000.00
Gas, use fuel, carrier refunds	232,955.33	253,815.59	280,000.00	300,000.00
Accounts receivable	129,858.16	220,683.69	175,000.00	175,000.00
Subtotals	$11,530,243.29	$9,771,694.00	$13,886,526.00	$13,420,000.00
Totals—all funds	$26,711,138.84	$21,088,999.58	$30,236,526.00	$32,200,000.00

TABLE 9

HISTORICAL RECORD OF ADMINISTRATIVE AND TAX COLLECTION COSTS AND REFUNDS, 1917–1960

Year	Fuel tax administration	Fuel tax refunds	Public Service Commission	Department of Motor Vehicles	Drivers' licenses	Highway Patrol	Common carrier refunds	Accounts receivable	Miscellaneous	Totals	Disbursements (From table 2)	Grand totals
1917	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	$36,985.07	$36,985.07
1918	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	75,327.59	75,327.59
1919	----------	----------	----------	----------	----------	----------	----------	$16,115.58	$11,629.46	$27,745.04	592,118.68	619,863.72
1920	----------	----------	----------	----------	----------	----------	----------	48,204.69	----------	48,204.69	1,495,782.06	1,543,986.75
1921	----------	----------	----------	----------	----------	----------	----------	125,301.47	6,946.89	132,248.36	1,144,891.38	1,277,139.74
1922	----------	----------	----------	----------	----------	----------	----------	1,645.65	1,530.82	3,176.47	1,449,349.14	1,452,525.61
1923	----------	----------	----------	----------	----------	----------	----------	83,088.96	----------	83,088.96	2,251,162.34	2,334,251.30
1924	----------	----------	----------	----------	----------	$10,445.11	----------	35,207.72	----------	45,652.83	3,115,375.76	3,161,028.59
1925	----------	----------	----------	----------	----------	12,583.02	----------	23,511.30	----------	36,094.32	2,825,661.29	2,861,755.61
1926	----------	----------	----------	----------	----------	15,949.23	----------	26,335.82	----------	42,285.05	1,438,584.75	1,480,869.80
1927	----------	----------	----------	----------	----------	14,128.40	----------	32,875.67	----------	47,004.07	1,945,945.16	1,992,949.23
1928	----------	----------	----------	----------	----------	6,219.20	----------	34,303.47	----------	40,522.67	1,791,213.43	1,831,736.10
1929	----------	----------	----------	----------	----------	7,741.24	----------	23,053.30	----------	30,794.54	2,184,191.97	2,214,986.51
1930	----------	----------	----------	----------	----------	8,504.29	----------	29,512.19	29,721.65	67,738.13	2,472,122.50	2,539,860.63
1931	----------	----------	----------	----------	----------	9,483.48	----------	7,212.21	27,912.50	44,608.19	1,483,856.18	1,528,464.37
1932	----------	----------	$4,041.83	----------	----------	11,831.55	----------	22,793.98	39,551.25	78,218.61	4,126,638.29	4,204,856.90
1933	----------	----------	3,869.78	----------	----------	12,413.97	----------	23,183.97	31,600.00	71,067.72	3,656,536.20	3,727,603.92
1934	----------	----------	5,917.51	----------	----------	22,336.62	----------	16,128.34	28,178.75	72,561.22	4,893,976.73	4,966,537.95
1935	$443.47	$27,960.92	6,362.03	----------	----------	23,554.18	$581.00	59,056.56	23,857.50	141,815.66	4,822,219.74	4,964,035.40
1936	3,064.69	84,323.70	10,798.01	----------	----------	24,918.05	454.00	16,637.51	5,378.50	145,574.46	5,395,453.18	5,541,027.64
1937	4,454.50	81,910.33	11,256.55	----------	----------	42,111.18	218.45	20,283.23	21,902.75	182,136.99	5,333,683.48	5,515,820.47
1938	3,750.83	72,208.36	11,449.27	----------	----------	36,344.76	790.56	37,804.42	8,793.75	171,141.95	4,439,252.86	4,610,394.81
1939	2,657.89	85,462.93	11,959.51	----------	----------	20,647.50	1,351.35	28,483.05	8,305.02	158,867.25	4,367,342.46	4,526,209.71
1940	6,087.39	93,421.13	11,672.99	----------	----------	41,151.06	2,810.58	25,814.30	6,966.34	187,923.79	3,591,333.69	3,779,257.48
1941	8,730.56	122,367.19	23,336.31	----------	$8,507.89	32,697.55	540.15	25,716.86	----------	221,896.51	4,287,077.07	4,508,973.58
1942	11,084.48	154,901.43	52,354.81	----------	62,074.55	----------	413.54	25,086.79	----------	305,915.60	4,105,944.79	4,411,860.39
1943	14,806.49	267,276.02	48,537.23	----------	33,023.42	----------	814.15	42,606.01	----------	407,063.32	3,628,911.28	4,035,974.60
1944	13,575.02	169,213.73	47,646.99	----------	47,768.81	----------	37.70	33,544.66	----------	311,786.91	3,109,074.60	3,420,861.51
1945	12,464.80	150,777.17	45,487.53	----------	37,124.35	----------	4,609.50	33,706.16	----------	284,169.51	2,142,170.68	2,426,340.19
1946	13,404.14	164,953.82	50,999.45	----------	39,378.68	----------	552.56	30,979.54	----------	300,268.19	3,021,063.12	3,321,331.31
1947	15,840.86	169,719.25	59,286.59	----------	60,451.54	----------	864.85	42,561.17	----------	348,724.26	7,297,857.82	7,646,582.08
1948	18,192.54	188,841.68	64,334.56	----------	66,773.01	----------	928.30	79,818.68	----------	418,888.77	6,831,837.46	7,250,726.23
1949	20,845.50	201,843.55	76,218.87	----------	67,204.89	----------	312.66	221,955.54	----------	588,381.01	7,720,096.66	8,308,477.67
1950	17,024.14	149,078.21	51,689.43	----------	43,866.03	112,860.02	849.43	39,406.55	----------	414,773.81	8,320,671.76	8,735,445.57
1951	14,595.02	163,558.05	47,850.58	----------	26,316.01	142,701.08	165.50	44,569.15	----------	439,755.39	8,390,101.20	8,829,856.59
1952	20,127.62	194,113.66	89,721.27	----------	68,108.74	169,988.11	949.00	158,863.60	----------	701,872.00	8,374,929.86	9,076,801.86
1953	22,884.24	220,939.95	101,661.31	----------	58,244.82	174,791.66	155.50	97,803.63	----------	676,481.11	10,737,772.71	11,414,253.82
1954	44,272.74	213,817.53	180,837.00	----------	88,070.00	313,254.00	795.70	85,033.85	----------	926,080.82	11,385,090.18	12,311,171.00
1955	27,175.25	218,001.54	116,894.20	----------	73,230.51	310,250.15	8,096.05	57,655.29	----------	811,302.99	12,393,817.89	13,205,120.88
1956	44,894.94	219,612.87	189,926.00	----------	101,463.90	402,423.50	7,163.22	90,437.42	----------	1,055,921.85	14,809,333.30	15,865,255.15
1957	35,863.30	249,648.68	167,686.27	----------	90,838.67	327,691.81	10,998.88	141,349.01	----------	1,024,076.62	18,200,965.81	19,225,042.43
1958	48,573.05	285,295.43	221,495.88	$46,157.00	157,335.92	478,343.64	13,638.07	144,100.39	----------	1,394,939.38	23,559,279.05	24,954,218.43
1959	46,374.52	228,796.03	----------	192,651.00	130,002.00	366,315.13	4,159.30	129,858.16	----------	1,098,156.14	25,612,982.70	26,711,138.84
1960	18,261.07	236,836.65	20,561.00	567,962.02	190,313.98	600,231.14	16,978.94	220,683.69	----------	1,871,828.49	19,217,171.09	21,088,999.58
Totals	$489,449.05	$4,414,879.81	$1,733,852.76	$806,770.02	$1,450,097.72	$3,751,910.63	$79,228.94	$2,482,289.54	$252,275.18	$15,460,753.65	$268,075,152.96	$283,535,906.61

TABLE 10
HISTORICAL RECORD—STATE'S SHARE TO TOTAL CONSTRUCTION COSTS—1937–1960

Year	Total construction costs	State's share of construction costs	State's share of construction (percent)
1937	$3,851,421	$513,777	13.3
1938	3,295,887	215,119	6.5
1939	3,164,717	308,980	9.8
1940	2,334,590	373,526	16.0
1941	2,766,626	651,046	23.5
Subtotals	$15,413,241	$2,062,448	13.4
Averages	3,082,648	412,489	
1942	$2,371,966	$420,375	17.7
1943	2,670,425	198,912	7.4
1944	2,106,608	312,818	14.8
1945	951,828	169,221	17.7
1946	1,451,620	684,510	47.2
Subtotals	$9,552,447	$1,785,836	18.7
Averages	1,910,489	357,167	
1947	$4,884,494	$1,679,782	34.4
1948	4,598,673	1,837,296	40.0
1949	5,057,880	1,393,520	25.9
1950	5,647,542	1,281,327	22.7
1951	5,464,220	1,396,215	25.6
Subtotals	$25,652.809	$7,588,140	29.6
Averages	5,130,561	1,517,628	
1952	$4,927,939	$1,605,641	32.6
1953	7,162,662	1,478,321	20.6
1954	7,019,593	2,116,776	30.2
1955	7,941,219	2,920,129	36.8
1956	9,476,780	1,780,898	18.8
Subtotals	$36,528,193	$9,901,765	27.1
Averages	7,305,638	1,980,353	
1957	$12,468,587	$2,710,922	21.7
1958	16,665,946	2,362,152	14.2
1959	18,737,918	4,373,345	23.3
1960	11,387,769	1,240,564	10.9
Subtotals	$59,260,220	$10,686,983	18.0
Averages	14,815,055	2,671,745	-----
Totals	$146,406,910	$32,025,172	21.9

TABLE 11
FEDERAL AID FUNDS EXPENDED BY SYSTEM TYPES

Fiscal year	Interstate	Primary	Secondary
1952	$52,502.46	$1,780,978.20	$1,353,967.97
1953	570,733.97	2,378,332.68	1,555,264.09
1954	364,380.37	2,464,428.13	1,921,807.15
1955	563,277.93	2,994,717.19	1,185,885.90
1956	137,159.00	4,512,831.05	2,516,695.39
1957	873,015.71	5,441,930.72	3,076,699.75
1958	3,300,565.00	6,158,119.34	4,778,074.87
1959	6,707,609.00	5,610,282.16	2,809,062.00
1960	3,648,621.25	4,097,676.33	2,926,940.00
Totals	$16,217,864.69	$35,439,295.80	$22,124,397.12

Fiscal year	Federal lands	Other	Total
1952	----------	$134,848.89	$3,322,297.52
1953	$376,856.26	803,153.61	5,684,340.61
1954	51,814.00	100,387.15	4,902,816.80
1955	219,994.00	57,214.93	5,021,089.95
1956	119,997.00	409,199.21	7,695,881.65
1957	55,067.32	310,951.48	9,757,664.98
1958	----------	293,080.72	14,529,839.93
1959	----------	53,942.39	15,180,895.55
1960	636,637.00	7,431.00	11,317,305.58
Totals	$1,460,365.58	$2,170,209.38	$77,412,132.57

TABLE 12
MAINTENANCE COSTS—1918–1960

Year	Snow removal	Maintenance: General	Maintenance: Total	Mileage maintained	Average Cost Per Mile: Total maintenance	Average Cost Per Mile: Excluding snow removal
1918–1922	.....	$185,848.90	$185,848.90	.....	.....	.....
1923	$12,695.38	98,029.49	110,724.87	$442.98	$249.95	$221.30
1924	884.53	121,904.07	122,788.60	765.23	160.46	159.30
1925	1,479.13	213,689.57	215,168.70	903.90	238.04	236.41
1926	1,803.43	305.096.09	306,899.52	1,213.43	252.92	251.43
1927	8,228.95	335,170.33	343,399.28	1,445.08	237.63	231.94
1928	3,167.50	356,094.58	359,262.08	1,680.73	213.75	211.87
1929	16,172.05	401,893.03	418,065.08	1,875.16	222.95	214.32
1930	19,466.28	481,286.18	500,752.46	1,905.43	262.80	252.59
1931	4,711.45	296,455.19	301,166.64	2,061.34	146.10	143.82
1932	83,632.96	534,744.45	618,377.41	2,113.02	292.65	253.07
1933	83,497.61	483,347.80	566,845.41	2,151.64	263.45	224.64
1934	8,227.13	494,488.53	502,715.66	2,287.37	219.78	216.18
1935	28,573.76	589,210.71	617,784.47	2,524.77	244.69	233.37
1936	50,948.37	624,777.69	675,726.06	2,656.68	254.35	235.17
1937	131,066.03	714,967.32	846,033.35	2,697.82	313.60	265.02
1938	59,468.88	696,836.38	756,305.26	2,770.20	273.01	251.55
1939	71,681.61	759,195.99	830,877.60	2,805.90	296.12	270.57
1940	42,403.61	720,671.72	763,075.33	2,908.48	262.36	247.78
1941	57,008.71	717,564.79	774,573.50	2,941.22	263.35	243.97
1942	87,357.42	761,432.15	848,789.57	3,015.76	281.45	252.48
1943	60,386.97	685,093.28	745,480.25	3,047.80	244.60	224.78
1944	94,585.25	608,755.60	703,340.85	3,084.67	228.01	197.35
1945	103,521.25	670,257.01	773,778.26	3,081.74	251.08	217.49
1946	104,222.71	750,972.18	855,194.89	3,093.24	276.47	242.77
1947	102,053.10	949,369.12	1,051,422.22	3,273.09	321.23	290.05
1948	130,913.49	1,125,112.12	1,256,025.61	3,421.75	367.07	328.81
1949	368,127.41	1,060,946.77	1,429,074.18	3,507.98	407.38	302.44
1950	170,748.71	1,298,730.35	1,469,479.06	3,565.96	412.09	364.20
1951	122,757.57	1,497,539.54	1,620,297.11	3,750.09	432.07	399.33
1952	603,200.27	1,652,974.12	2,256,174.39	3,770.60	598.36	438.38
1953	194,236.59	1,964,216.17	2,158,452.76	3,899.96	553.46	503.65
1954	203,088.17	2,312,250.78	2,515,338.95	3,915.47	642.41	590.54
1955	345,156.74	2,062,671.30	2,407,828.04	3,952.77	609.15	521.82
1956	373,676.73	2,386,026.17	2,759,702.90	4,026.56	685.37	592.57
1957	263,686.02	2,504,661.04	2,768,347.06	4,166.47	664.44	601.15
1958	430,682.84	2,879,731.76	3,310,414.60	4,303.89	769.17	669.10
1959	312,084.25	3,150,505.89	3,462,590.14	4,376.21	791.23	719.92
1960	482,449.72	3,497,714.05	3,980,163.77	4,452.98	893.82	785.48

CHART 6

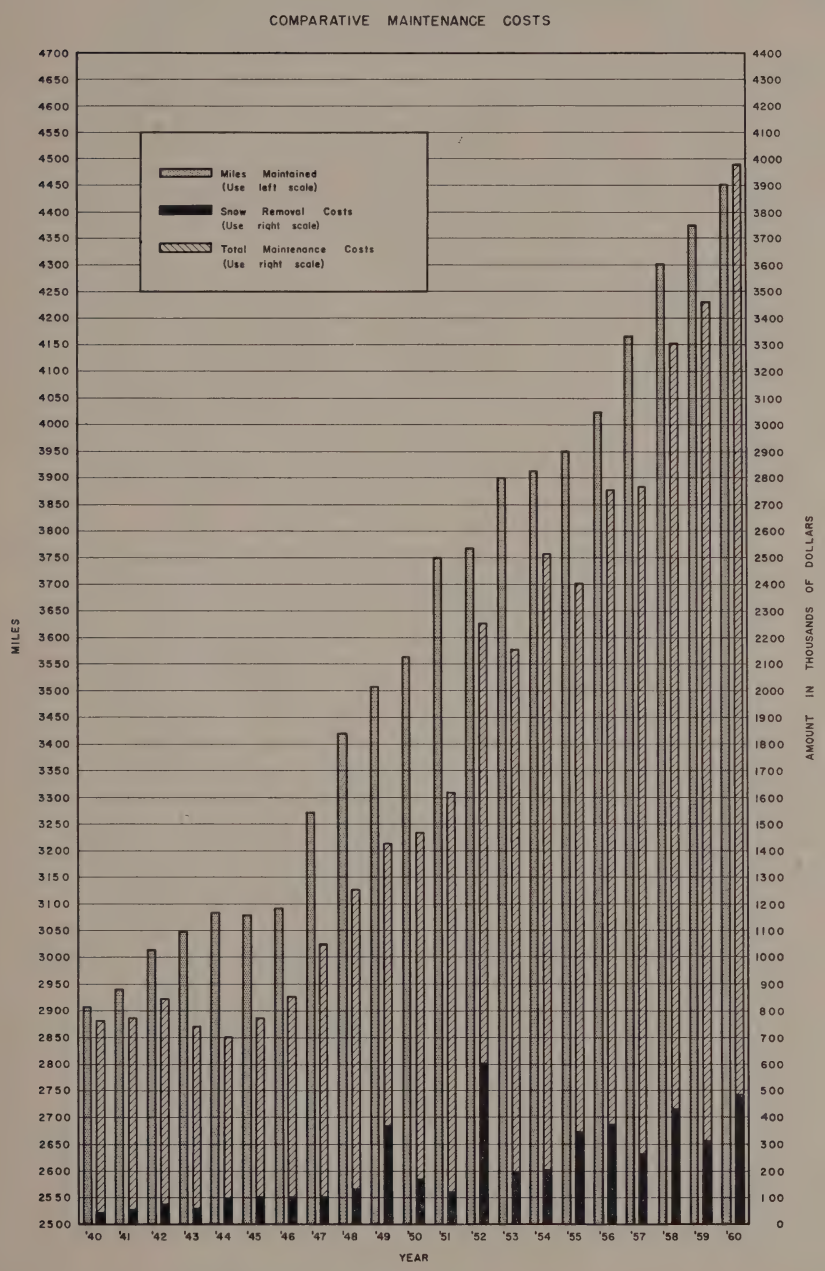

COMPARATIVE MAINTENANCE COSTS
Miles Maintained (Use left scale)
Snow Removal Costs (Use right scale)
Total Maintenance Costs (Use right scale)
MILES
AMOUNT IN THOUSANDS OF DOLLARS
YEAR
'40 '41 '42 '43 '44 '45 '46 '47 '48 '49 '50 '51 '52 '53 '54 '55 '56 '57 '58 '59 '60

TABLE 13
EXPENDITURES FOR VARIOUS MAINTENANCE OPERATIONS ON ALL ROADS MAINTAINED BY THE DEPARTMENT
1959–1960

	Fiscal year 1959	Fiscal year 1960	Total	Percent
Routine roadway operations—				
Patching holes and ruts, spot scaling	$521,921.39	$627,698.89	$1,149,620.28	15.44
Dragging, blading reshaping	34,640.70	27,899.44	62,540.14	.84
Filling, trimming, expansion joints, cracks	5,136.79	10,355.51	15,492.30	.21
Applying light seal and blotter or chips	273,196.41	226,807.69	500,004.10	6.72
Subtotals	$834,895.29	$892,761.53	$1,727,656.82	23.21
Special roadway operations—				
Applying dust palliatives	$236.98	$959.04	$1,196.02	.02
Replacement of gravel, crushed stone	3,788.64	7,853.60	11,642.24	.16
Reprocessing bituminous surface	148,556.45	100,961.34	249,517.79	3.35
Bituminous surface treatment	150,785.78	142,101.26	292,887.04	3.94
Heavy chips and seal	77,702.42	223,005.25	300,707.67	4.03
Subtotals	$381,070.27	$474,880.49	$855,950.76	11.50
Shoulders and approaches—				
Shoulder patch and minor washouts	$303,980.65	$199,783.62	$503,764.27	6.77
Bituminous shoulder treatment	120,228.72	22,091.38	142,320.10	1.91
Reprocessing bituminous shoulders	15,752.25	23,818.94	39,571.19	.53
Subtotals	$439,961.62	$245,693.94	$685,655.56	9.21
Roadside and drainage—				
Repair of cuts, fills, slopes	$286,217.24	$453,520.10	$739,737.34	9.94
Cleaning, retrenching drains	155,647.08	176,886.27	332,533.35	4.47
Removal of weeds and debris	410,000.49	451,458.14	861,458.63	11.58
Landscaping roadsides	11,131.83	8,406.35	19,538.18	.26
Maintenance of sidewalks, dikes	50,321.56	44,130.26	94,451.82	1.27
Halogeton control	487.92		487.92	.01
Subtotals	$913,806.12	$1,134,401.12	$2,048,207.24	27.53
Traffic services—				
Repairs to signs, safety devices	$249,645.24	$359,641.89	$609,287.13	8.18
Removal of advertising signs	1,205.05	970.34	2,175.39	.03
Traffic lane and center striping	148,504.00	165,583.31	314,087.31	4.22
Maintenance of guardrails	19,084.36	23,248.57	42,332.93	.57
Highway and bridge lighting	4,283.74	6,171.82	10,455.56	.14
Maintenance of roadside rests	24,812.44	31,395.82	56,208.26	.76
Pedestrian crossing markings	16,330.14	21,169.50	37,499.64	.50
Patrolling	40,884.62	63,138.98	104,023.60	1.40
Subtotals	$504,749.59	$671,320.23	$1,176,069.82	15.80
Snow, ice and sand control—				
Snow fence and markers	$23,776.97	$48,610.25	$72,387.22	.97
Removal of snow and ice	221,679.94	306,519.31	528,199.25	7.08
Sanding, salting icy surfaces	62,895.30	122,119.96	185,015.26	2.49
Open waterways and drains	3,732.04	5,200.20	8,932.24	.12
Removal of sand drifts	3,117.01	2,544.12	5,661.13	.08
Maintain road blocks	54.12	112.31	166.43	.01
Subtotals	$315,255.38	$485,106.15	$800,361.53	10.75

TABLE 13—*Continued*

	Fiscal year 1959	Fiscal year 1960	Total	Percent
Structures—				
Cleaning, opening channels	$9,362.51	$2,754.41	$12,116.92	.17
Repairs to structures	3,934.18	1,610.24	5,544.42	.07
Painting structures	1,619.35	883.16	2,502.51	.03
Maintaining pumping plants	1,371.68	1,598.15	2,969.83	.04
Bridge and culvert inspections	1,975.02	1,167.58	3,142.60	.04
Subtotals	$18,262.74	$8,013.54	$26,276.28	.35
Special maintenance, fire, flood, etc.	$24,294.35	$34,579.14	$58,873.49	.79
Subtotals	$24,294.35	$34,579.14	$58,873.49	.79
Total direct expenditures	$3,432,295.36	$3,946,756.14	$7,379,051.50	99.14
Maintenance administration—Headquarters	30,294.78	33,407.63	63,702.41	.86
Total for fiscal year	$3,462,590.14	$3,980,163.77	$7,442,753.91	100.00
Total miles maintained	4,376.21	4,452.98		
Average cost per mile (Includes snow removal)	$791.23	$893.82		
Average cost per mile (Excludes snow removal)	$719.92	$785.48		

TABLE 14
CONSTRUCTION AND RECONSTRUCTION COMPLETED AND UNDER CONTRACT ON THE DESIGNATED STATE HIGHWAY SYSTEM AT THE CLOSE OF THE BIENNIUM

Type	Miles new construction completed during biennium	Miles reconstruction completed during biennium	Miles new construction under contract at close of biennium	Miles reconstruction under contract at close of biennium	Totals
Grading	12.006[1]	----------	----------	----------	12.006
Roadmix	197.495[2]	39.108	----------	6.970	243.573
Plantmix	92.650[3]	207.995	4.320	98.147	403.112
Totals	302.151	247.103	4.320	105.117	658.691

[1]Includes 12.006 miles constructed with Forest Highway Funds by Bureau of Public Roads.

[2]Includes 4.386 miles constructed with Forest Highway Funds by Bureau of Public Roads.

[3]Includes 12.278 miles constructed with Forest Highway Funds by Bureau of Public Roads and 14.500 miles constructed with Indian Service Funds by the Indian Service.

TABLE 16

BRIDGE AND GRADE SEPARATION SUMMARY

Number of Structures Built by State Highway Department

	Constructed or under construction as of June 30, 1958	Constructed during biennium or under construction June 30, 1960	Structures abandoned during biennium	Total as of June 30, 1960	Structures on highway system *not* built by State Highway Dept.	Total structures as of June 30, 1960
Summary by type—						
Plain concrete	4	0	0	4	1	5
Reinforced concrete	177	41	3	215	1	216
Structural steel	29	1	2	28	10	38
Timber	34	0	7	27	8	35
Composite structures (reinforced concrete and structural steel)	11	0	0	11	0	11
Prestressed concrete	2	3	0	5	0	5
Totals	257	45	12	290	20	310
Total length of structures in feet	22,807	3,201	1,157	24,851	1,746	26,597
Average length of bridge in feet	89	71	96	86	87	86
Summary by purpose—						
Bridges over waterways	219	18	10	227	16	243
Railroad grade separations	32	3	2	33	4	37
Interchange structures	6	14	0	20	0	20
Highway grade separations	0	10	0	10	0	10
Totals	257	45	12	290	20	310

TABLE 17
AVERAGE CONTRACT PRICES

Year	Road excavation (Cu. yd.)	Borrow (Cu. yd.)	Type I gravel (Ton)	Type II gravel (Ton)	Liquid asphalts (Ton)	Plantmix surface (Ton)	Class A and class AA concrete (Cu. yd.)	Reinf. steel (Pound)	24-inch CMP. (L. Ft.)	Composite index
1955 Average	$0.388	$0.219	$0.660	$0.869	$31.97	$2.64	$61.17	$0.120	$5.55	100.0
1956										
1st quarter	.643	.247	.773	.808	35.85	2.53	86.66	.128	6.33	123.1
2nd quarter	.421	.300	1.65	1.49	39.41	2.71	65.00	.140	6.50	130.2
3rd quarter	.472	.344	.800	.785	35.91	2.48	77.71	.148	6.62	111.2
4th quarter	.440	.307	.953	.910	35.90	2.21	81.32	.151	6.11	110.4
1956 Average	.506	.300	.845	.893	39.86	2.48	78.98	.144	6.08	118.2
1957										
1st quarter	.374	.211	.685	.833	38.30	2.70	80.72	.132	6.82	105.5
2nd quarter	.599	.240	.806	.962	39.60	3.12	95.87	.152	6.65	130.4
3rd quarter	.603	.340	.792	.979	40.45	2.88	65.75	.153	6.69	128.7
4th quarter	.366	.300	.625	.880	41.13	3.25	74.47	.156	7.48	119.8
1957 Average	.562	.291	.751	.920	39.63	2.96	71.63	.147	6.72	124.3
1958										
1st quarter	.605	.226	.624	.736	36.21	2.59	68.86	.140	6.67	117.2
2nd quarter	.399	.227	.861	.971	36.11	2.31	86.10	.174	6.59	108.0
3rd quarter	.653	.273	.730	.860	36.16	2.57	70.56	.148	6.95	124.2
4th quarter	.444	.250	.596	.749	34.86	2.41	68.16	.133	6.64	103.3
1958 Average	.535	.241	.683	.813	35.86	2.49	71.37	.142	6.73	113.3
1959										
1st quarter	.511	.260	.690	.990	31.84	2.33	66.19	.125	6.50	110.0
2nd quarter	.299	.288	.709	.923	38.29	2.72	72.41	.144	6.64	102.4
3rd quarter	.421	.180	.714	.884	35.94	2.51	65.04	.142	6.48	105.7
4th quarter	.436	.180	.704	.805	36.83	2.51	65.04	.142	7.00	106.2
1959 Average	.397	.234	.704	.925	35.18	2.53	66.86	.129	6.61	104.6
1960										
1st quarter	*1.11	.180	.608	.712	35.50	2.53	81.85	.151	6.50	101.2
2nd quarter	.537	.180	.697	.893	33.80	2.35	62.30	.132	6.55	111.0

*Not used for computing Index.

CHART 7

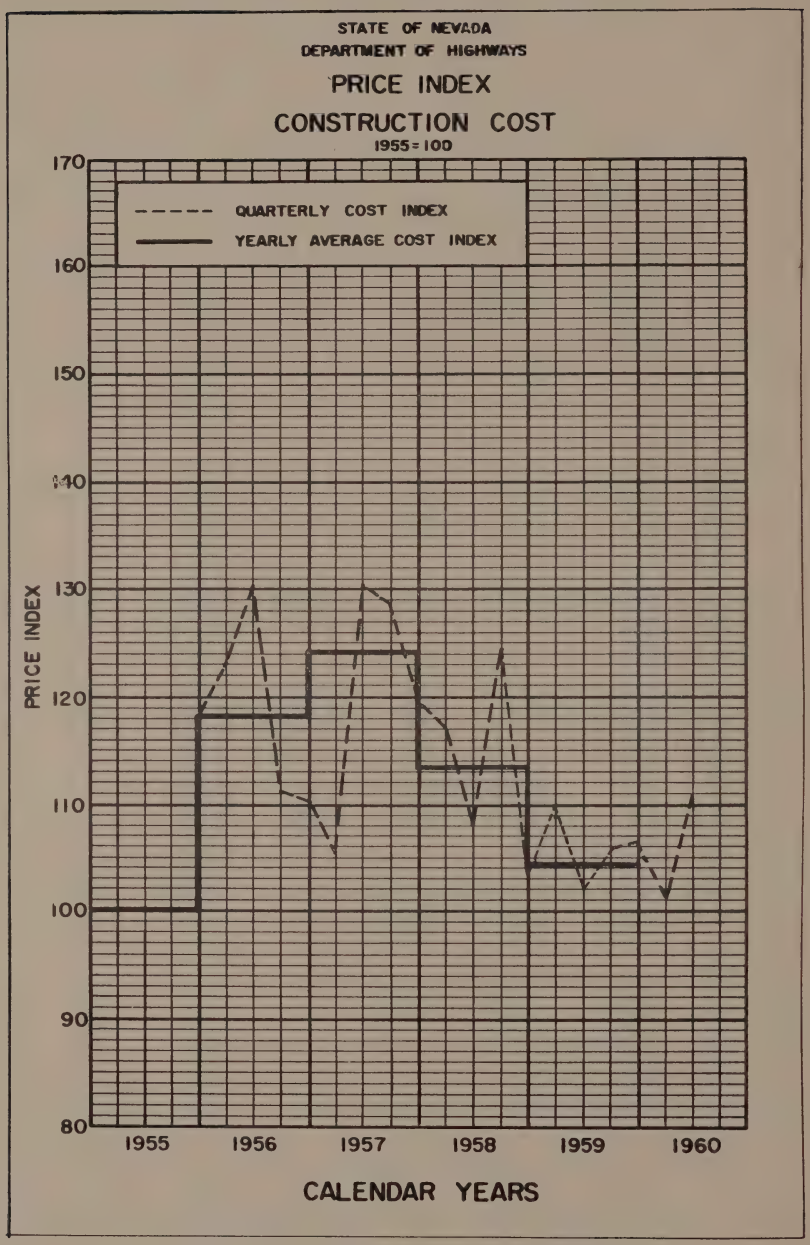

STATE OF NEVADA
DEPARTMENT OF HIGHWAYS
PRICE INDEX
CONSTRUCTION COST
1955=100
QUARTERLY COST INDEX
YEARLY AVERAGE COST INDEX
PRICE INDEX
170
160
150
140
130
120
110
100
90
80
1955
1956
1957
1958
1959
1960
CALENDAR YEARS

TABLE 18

STATUS OF MILEAGE ON THE VARIOUS "STATE-INTEREST" HIGHWAY SYSTEMS IN NEVADA AS OF DECEMBER, 1959

County	Improved by State Highway Department: Federal-aid system	Federal-aid secondary system	Remaining state highway system	Total	*State interest roads not improved by State	Grand total all types and all systems
Churchill	142.1	100.1	-------	242.2	15.0	257.2
Clark	279.3	204.2	18.3	501.8	214.8	716.6
Douglas	49.0	42.5	1.4	92.9	14.4	107.3
Elko	330.7	227.8	19.1	577.6	262.0	839.6
Esmeralda	115.3	106.0	15.8	237.1	20.2	257.3
Eureka	74.0	105.7	-------	179.7	123.5	303.2
Humboldt	135.2	140.4	-------	275.6	164.3	439.9
Lander	104.0	118.1	19.6	241.7	102.5	344.2
Lincoln	99.7	203.9	-------	303.6	100.8	404.4
Lyon	62.1	162.3	4.0	228.4	88.1	316.5
Mineral	108.6	92.9	11.0	212.5	23.6	236.1
Nye	240.7	262.9	4.3	507.9	252.2	760.1
Ormsby	20.6	15.6	3.8	40.0	0.3	40.3
Pershing	75.0	76.9	-------	151.9	147.5	299.4
Storey	0.2	12.1	-------	12.3	23.0	35.3
Washoe	93.0	167.3	12.7	273.0	297.0	570.0
White Pine	265.0	148.8	-------	413.8	117.6	531.4
Totals	2,194.5	2,187.5	110.0	4,492.0	1,966.8	6,458.8

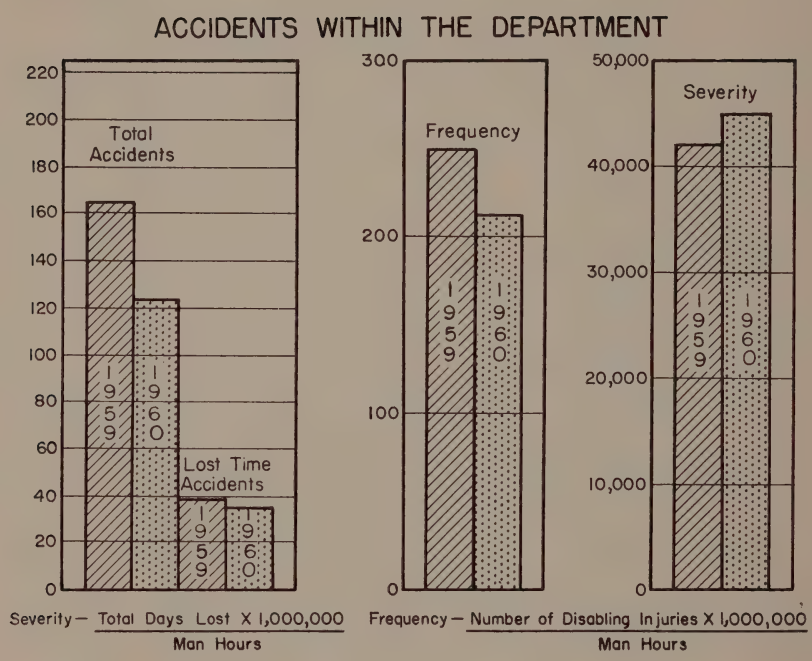
TABLE 19

MILEAGE BY SURFACE TYPES AND SYSTEMS AS OF DECEMBER 31, 1959

Type						
A-B Primitive and unimproved	-------	-------	-------	-------	299.9	299.9
C-D Graded and drained and soil-surfaced	-------	-------	-------	-------	20.8	20.8
E Gravel or crushed stone	0.5	57.6	50.0	108.1	1,552.7	1,660.8
F Bituminous surface treated	-------	11.0	0.3	11.3	10.3	21.6
G Roadmix or plantmix surface	2,187.8	2,113.3	59.0	4,360.1	82.4	4,442.5
H-I High type bituminous	5.7	5.4	0.6	11.7	0.7	12.4
J Portland cement concrete	0.5	0.2	0.1	0.8	-------	0.8
Totals	2,194.5	2,187.5	110.0	4,492.0	1,966.8	6,548.8

*State-interest roads are all routes on the State Designated System or Federal-aid Systems.

CHART 8


ACCIDENTS WITHIN THE DEPARTMENT
Total Accidents
Lost Time Accidents
Frequency
Severity
1959
1960
0
20
40
60
80
100
120
140
160
180
200
220
100
200
300
10,000
20,000
30,000
40,000
50,000
Severity — Total Days Lost X 1,000,000 / Man Hours
Frequency — Number of Disabling Injuries X 1,000,000 / Man Hours

DIVISION OF REVENUES FROM MOTOR VEH

County	1951	1952	1953	
Churchill	$3,565.00	$3,598.25	$2,967.75	
Clark	22,116.00	25,993.00	24,108.00	
Douglas	1,678.00	1,765.25	1,440.75	
Elko	5,790.00	5,780.75	4,746.00	
Esmeralda	377.00	404.25	282.00	
Eureka	452.00	540.50	462.75	
Humboldt	2,610.00	2,502.75	2,008.50	
Lander	885.00	836.75	699.00	
Lincoln	1,631.00	1,748.25	1,396.50	
Lyon	2,170.00	2,296.75	2,315.25	
Mineral	2,386.00	2,491.50	2,846.25	
Nye	1,499.00	1,743.00	1,833.75	
Ormsby	2,014.00	2,061.00	1,620.00	
Pershing	1,723.00	1,815.50	1,573.50	
Storey	354.00	346.75	250.50	
Washoe	26,648.00	27,356.25	21,432.75	
White Pine	4,327.00	4,802.50	3,941.25	
Totals	$80,225.00	$86,083.00	$73,924.50	$

DIVISION OF REVENUES FROM F

County	1951	1952	1953	
Churchill	$32,166.43	$36,147.83	$41,366.14	$
Clark	215,917.03	260,293.27	309,418.44	3
Douglas	18,147.10	17,222.50	20,958.44	
Elko	108,468.09	121,263.53	139,237.15	1
Esmeralda	12,919.38	14,678.53	16,632.10	
Eureka	13,693.72	16,680.73	19,952.91	
Humboldt	55,157.67	59,471.34	68,696.05	
Lander	27,074.72	29,827.82	34,056.51	
Lincoln	33,450.06	36,453.82	43,551.58	
Lyon	33,705.80	37,273.81	47,883.75	
Mineral	25,341.35	32,219.94	38,348.46	
Nye	51,395.72	59,305.04	63,617.54	
Ormsby	20,084.03	22,605.28	26,943.93	
Pershing	37,044.55	39,613.66	46,835.36	
Storey	4,539.03	4,681.14	5,894.61	
Washoe	206,968.51	218,509.88	249,138.76	2
White Pine	60,990.95	67,895.72	78,190.67	
Totals	$957,064.14	$1,074,143.84	$1,250,722.40	$1,4

CHART 8

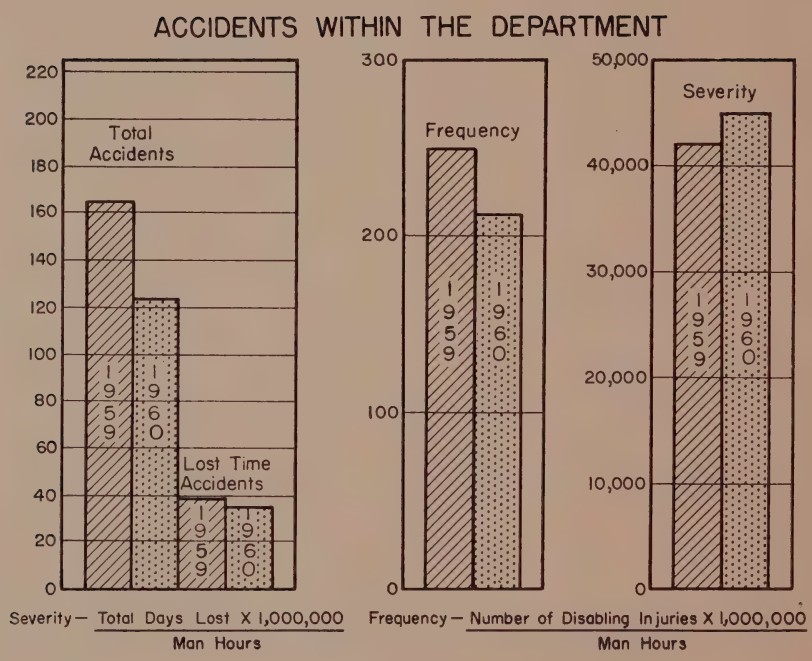

ACCIDENTS WITHIN THE DEPARTMENT
Total Accidents
Lost Time Accidents
Frequency
Severity
1959
1960
0
20
40
60
80
100
120
140
160
180
200
220
100
200
300
10,000
20,000
30,000
40,000
50,000
Severity — Total Days Lost X 1,000,000 / Man Hours
Frequency — Number of Disabling Injuries X 1,000,000 / Man Hours

TABLE 20
COMPARISON OF AVERAGE DAILY TRAFFIC AT AUTOMATIC RECORDERS FOR 10 FISCAL-YEAR PERIODS

	Station	Daily Average									
		1950-1951	1951-1952	1952-1953	1953-1954	1954-1955	1955-1956	1956-1957	1957-1958	1958-1959	1959-1960
101	U. S. 40, east of Sparks	2,825	2,990	3,260	3,555	3,904	4,066	4,723	4,940	5,045	5,156
102–A	U. S. 91 and 466, south of Las Vegas	3,325	3,940	4,463	5,073	5,465	5,666	6,200	5,678	6,340	6,566
103	State Route 46, south of Elko	424	500	564	580	654	708	789	823	844	
103–A	State Route 46, two miles south of Elko	------	------	------	------	------	------	------	------	------	346
104	U. S. 395, north of Carson City	2,035	2,132	2,396	2,674	2,964	3,143	3,283	3,584	3,929	4,206
106	State Route 59, south of Lovelock	392	394	393	394	299	269	303	303	321	300
107	U. S. 40, east of Elko	2,176	2,307	2,527	2,476	2,553	2,582	2,632	2,670	2,812	
107–A	U. S. 40, northeast of Elko	------	------	------	------	------	------	------	------	------	2,188
108	U. S. 50 and 93, north of McGill	587	644	665	691	753	767	798	744	652	685
109	U. S. 6 and 93, south of East Ely	509	556	637	761	849	936	1,073	1,023	930	
109–A	U. S. 6, 50, and 93, south of Ely	------	------	------	------	------	------	------	------	------	539
110	U. S. 93 and 95, southeast of Las Vegas	6,330	8,050	9,606	10,504	11,323	11,343	10,520	10,213	10,516	11,362
112	U. S. 6 and 95, west of Tonopah	586	611	712	750	830	881	912	916	969	1,093
114	U. S. 95, northwest of Las Vegas	613	1,419	1,304	1,124	1,602	1,455	1,907	1,743	1,787	1,682
115–A	U. S. 40, east of Wells	1,264	1,314	1,378	1,569	1,592	1,632	1,767	1,763	1,775	1,779
116	U. S. 40, west of Verdi	2,731	2,843	3,343	3,741	3,658	3,706	3,909	3,903	4,324	5,186
117	State Route 12, north of Logandale	421	453	541	537	562	572	580	618	610	648
118	U. S. 50, east of Spooners	1,114	1,311	1,476	1,648	1,911	2,076	2,338	2,495	3,110	3,439
119–A	State Route 3, south of Yerington	599	670	787	938	991	980	949	644	645	503
120	U. S. 91 and 93, north of Nellis Air Base	1,804	2,131	2,306	2,579	2,614	2,661	2,806	3,007	2,943	3,932
121	U. S. 40 and 95, northeast of Lovelock	1,658	1,822	1,859	2,051	2,104	2,183	2,119	2,228	2,284	2,462
122	U. S. 40, west of Battle Mountain	1,322	1,471	1,594	1,685	1,720	1,736	1,808	1,859	1,866	2,055
123	U. S. 50, one mile west of Peterson's Maintenance Station	------	------	------	242	262	269	290	275	288	300
124	State Route 27, west of U. S. 395	------	------	------	------	------	773	1,011	1,238	1,135	1,120

TABLE 21
HICLE REGISTRATIONS TO COUNTIES (BY STATE CONTROLLER)

1954	1955	1956	1957	1958	1959	1960
$3,426.00	$35,049.75	$7,070.25	$3,958.50	$4,021.50	$5,328.00	$5,642.00
29,400.75	.....	33,042.75	45,546.75	44,239.50	61,297.00	130,741.00
1,692.75	.....	3,041.25	1,802.25	1,998.75	3,022.00	3,595.00
4,983.75	.....	9,072.75	5,226.75	5,298.00	7,332.00	7,587.00
288.75	.....	492.00	333.75	320.25	443.00	477.00
454.50	.....	945.00	556.50	598.50	693.00	660.00
2,246.25	.....	4,208.25	2,692.50	2,820.00	3,563.00	3,691.00
724.50	.....	1,337.25	860.25	907.50	1,209.00	1,158.00
1,618.50	.....	2,646.00	1,563.75	1,587.00	1,995.00	1,773.00
2,850.75	.....	4,980.75	2,980.50	2,979.00	4,029.00	4,075.00
3,150.00	.....	5,517.75	3,063.75	3,127.50	4,002.00	4,007.00
2,013.00	.....	4,019.25	1,986.00	2,532.75	3,943.00	3,735.00
1,757.25	.....	3,916.50	2,313.00	2,474.25	3,679.00	4,181.00
1,705.50	.....	2,937.75	1,709.25	1,717.50	2,382.00	2,604.00
267.75	.....	506.25	327.00	337.50	438.00	482.00
23,589.75	.....	46,298.25	29,853.00	31,647.75	44,728.00	94,905.00
4,260.00	.....	8,370.00	4,972.50	5,163.00	6,445.25	5,918.00
84,429.75	$35,049.75	$138,402.00	$109,746.00	$111,770.25	$154,528.25	$275,231.00

TABLE 22
UEL TAXES TO COUNTIES (BY STATE CONTROLLER)

1954	1955	1956	1957	1958	1959	1960
48,479.43	$53,940.71	$58,170.77	$66,894.80	$57,663.60	$65,000.28	$68,158.62
70,665.00	410,587.25	450,540.91	493,723.08	463,794.18	535,766.78	595,209.14
23,579.49	24,461.12	24,777.04	30,084.92	25,217.84	29,447.39	30,226.74
53,734.49	156,780.73	162,203.31	183,548.89	159,028.25	177,763.03	189,032.44
17,851.36	19,060.47	21,196.17	23,832.79	21,225.23	24,013.74	26,157.23
19,005.44	21,356.44	22,974.69	25,163.51	22,311.86	24,367.61	27,318.10
76,837.33	80,425.44	86,735.28	97,452.25	84,486.65	96,482.18	107,611.92
36,057.73	37,940.89	41,256.48	45,263.04	39,907.77	44,210.76	46,552.45
46,538.02	48,668.37	50,962.01	57,602.75	48,697.64	54,270.61	57,267.38
50,912.64	59,124.47	66,391.22	69,434.28	59,980.18	64,789.42	67,846.89
41,273.28	35,742.64	36,104.78	47,655.76	41,791.24	44,981.08	46,366.37
64,844.60	90,430.36	88,352.14	98,173.46	83,515.72	99,473.51	104,196.03
32,052.86	34,639.74	34,646.48	41,166.78	38,016.20	47,257.74	54,864.52
50,187.05	51,763.60	53,474.80	59,955.24	52,115.61	59,552.03	61,671.42
6,059.62	6,641.97	7,324.66	8,127.39	7,410.30	9,401.18	8,949.59
80,857.47	299,986.65	321,653.27	368,734.54	324,980.02	381,148.37	410,935.39
89,937.16	97,724.24	100,801.88	115,331.83	98,047.84	105,458.01	109,323.93
08,872.97	$1,529,275.09	$1,627,565.89	$1,832,145.31	$1,628,190.13	$1,863,383.72	$2,011,688.16

IN APPRECIATION OF FAITHFUL SERVICE

This Twenty-second Biennial Report of the Nevada Department of Highways is dedicated to those employees who have served 15 years or longer with the Department.

Thanks to their dedicated and faithful service, it has been possible for the Department to provide a constantly expanding and improved system of highways not only for the people of Nevada, but to the large number of visitors who contribute so importantly to the state's economy.

SERVICE RECORD

35 YEARS OR MORE

Armstrong, G. F.
Cross, Ernest
Glock, J. A.
Hancock, J. L.
Parry, W. R.
Pohl, Ernest C.
Rawls, Paul R.
Reid, Bonnie O.
Schultz, Marion I.
Sullivan, John M.
Wright, W. O.

30 TO 35 YEARS

Boden, Eldor J.
Brown, Charles L.
Eldredge, Reuben E.
Harmer, Francis J.
Little, L. W.
Morrison, F. H.
Perry, James A.
Rose, Dale V.
Squires, Herbert A.
Waite, Marvin H.

25 TO 30 YEARS

Boardman, E. T.
Bonafous, Joe
Borgna, Victor
Brockway, G. B.
Clyde, Victor W.
Coleman, George P.
Fell, Verrill W.
Fodrin, Melvin J.
Gibson, W. H.
Greenhalgh, Jack F.
Hannig, Reed A.
Hays, D. H.
Kinne, A. G.
Koontz, Louis
Manhire, John T.
McInnis, J. R.
McMurtrey, E. A.
Meder, Zita D.
Miles, Cyril D.
Odell, W. Alan
Parvin, Jack
Robbins, Paul E.
Smith, Charles F.
Sundeen, Stanley D.

TABLE 21

DIVISION OF REVENUES FROM MOTOR VEHICLE REGISTRATIONS TO COUNTIES (BY STATE CONTROLLER)

County	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Churchill	$3,565.00	$3,598.25	$2,967.75	$3,426.00	$35,049.75	$7,070.25	$3,958.50	$4,021.50	$5,328.00	$5,642.00
Clark	22,116.00	25,993.00	24,108.00	29,400.75	.....	33,042.75	45,546.75	44,239.50	61,297.00	130,741.00
Douglas	1,678.00	1,765.25	1,440.75	1,692.75	.....	3,041.25	1,802.25	1,998.75	3,022.00	3,595.00
Elko	5,790.00	5,780.75	4,746.00	4,983.75	.....	9,072.75	5,226.75	5,298.00	7,332.00	7,587.00
Esmeralda	377.00	404.25	282.00	288.75	.....	492.00	333.75	320.25	443.00	477.00
Eureka	452.00	540.50	462.75	454.50	.....	945.00	556.50	598.50	693.00	660.00
Humboldt	2,610.00	2,502.75	2,008.50	2,246.25	.....	4,208.25	2,692.50	2,820.00	3,563.00	3,691.00
Lander	885.00	836.75	699.00	724.50	.....	1,337.25	860.25	907.50	1,209.00	1,158.00
Lincoln	1,631.00	1,748.25	1,396.50	1,618.50	.....	2,646.00	1,563.75	1,587.00	1,995.00	1,773.00
Lyon	2,170.00	2,296.75	2,315.25	2,850.75	.....	4,980.75	2,980.50	2,979.00	4,029.00	4,075.00
Mineral	2,386.00	2,491.50	2,846.25	3,150.00	.....	5,517.75	3,063.75	3,127.50	4,002.00	4,007.00
Nye	1,499.00	1,743.00	1,833.75	2,013.00	.....	4,019.25	1,986.00	2,532.75	3,943.00	3,735.00
Ormsby	2,014.00	2,061.00	1,620.00	1,757.25	.....	3,916.50	2,313.00	2,474.25	3,679.00	4,181.00
Pershing	1,723.00	1,815.50	1,573.50	1,705.50	.....	2,937.75	1,709.25	1,717.50	2,382.00	2,604.00
Storey	354.00	346.75	250.50	267.75	.....	506.25	327.00	337.50	438.00	482.00
Washoe	26,648.00	27,356.25	21,432.75	23,589.75	.....	46,298.25	29,853.00	31,647.75	44,728.00	94,905.00
White Pine	4,327.00	4,802.50	3,941.25	4,260.00	.....	8,370.00	4,972.50	5,163.00	6,445.25	5,918.00
Totals	$80,225.00	$86,083.00	$73,924.50	$84,429.75	$35,049.75	$138,402.00	$109,746.00	$111,770.25	$154,528.25	$275,231.00

TABLE 22

DIVISION OF REVENUES FROM FUEL TAXES TO COUNTIES (BY STATE CONTROLLER)

County	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Churchill	$32,166.43	$36,147.83	$41,366.14	$48,479.43	$53,940.71	$58,170.77	$66,894.80	$57,663.60	$65,000.28	$68,158.62
Clark	215,917.03	260,293.27	309,418.44	370,665.00	410,587.25	450,540.91	493,723.08	463,794.18	535,766.78	595,209.14
Douglas	18,147.10	17,222.50	20,958.44	23,579.49	24,461.12	24,777.04	30,084.92	25,217.84	29,447.39	30,226.74
Elko	108,468.09	121,263.53	139,237.15	153,734.49	156,780.73	162,203.31	183,548.89	159,028.25	177,763.03	189,032.44
Esmeralda	12,919.38	14,678.53	16,632.10	17,851.36	19,060.47	21,196.17	23,832.79	21,225.23	24,013.74	26,157.23
Eureka	13,693.72	16,680.73	19,952.91	19,005.44	21,356.44	22,974.69	25,163.51	22,311.86	24,367.61	27,318.10
Humboldt	55,157.67	59,471.34	68,696.05	76,837.33	80,425.44	86,735.28	97,452.25	84,486.65	96,482.18	107,611.92
Lander	27,074.72	29,827.82	34,056.51	36,057.73	37,940.89	41,256.48	45,263.04	39,907.77	44,210.76	46,552.45
Lincoln	33,450.06	36,453.82	43,551.58	46,538.02	48,668.37	50,962.01	57,602.75	48,697.64	54,270.61	57,267.38
Lyon	33,705.80	37,273.81	47,883.75	50,912.64	59,124.47	66,391.22	69,434.28	59,980.18	64,789.42	67,846.89
Mineral	25,341.35	32,219.94	38,348.46	41,273.28	35,742.64	36,104.78	47,655.76	41,791.24	44,981.08	46,366.37
Nye	51,395.72	59,305.04	63,617.54	64,844.60	90,430.36	88,352.14	98,173.46	83,515.72	99,473.51	104,196.03
Ormsby	20,084.03	22,605.28	26,943.93	32,052.86	34,639.74	34,646.48	41,166.78	38,016.20	47,257.74	54,864.52
Pershing	37,044.55	39,613.66	46,835.36	50,187.05	51,763.60	53,474.80	59,955.24	52,115.61	59,552.03	61,671.42
Storey	4,539.03	4,681.14	5,894.61	6,059.62	6,641.97	7,324.66	8,127.39	7,410.30	9,401.18	8,949.59
Washoe	206,968.51	218,509.88	249,138.76	280,857.47	299,986.65	321,653.27	368,734.54	324,980.02	381,148.37	410,935.39
White Pine	60,990.95	67,895.72	78,190.67	89,937.16	97,724.24	100,801.88	115,331.83	98,047.84	105,458.01	109,323.93
Totals	$957,064.14	$1,074,143.84	$1,250,722.40	$1,408,872.97	$1,529,275.09	$1,627,565.89	$1,832,145.31	$1,628,190.13	$1,863,383.72	$2,011,688.16

IN APPRECIATION OF FAITHFUL SERVICE

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SERVICE RECORD

35 YEARS OR MORE

Armstrong, G. F.
Cross, Ernest
Glock, J. A.
Hancock, J. L.
Parry, W. R.
Pohl, Ernest C.
Rawls, Paul R.
Reid, Bonnie O.
Schultz, Marion I.
Sullivan, John M.
Wright, W. O.

30 TO 35 YEARS

Boden, Eldor J.
Brown, Charles L.
Eldredge, Reuben E.
Harmer, Francis J.
Little, L. W.
Morrison, F. H.
Perry, James A.
Rose, Dale V.
Squires, Herbert A.
Waite, Marvin H.

25 TO 30 YEARS

Boardman, E. T.
Bonafous, Joe
Borgna, Victor
Brockway, G. B.
Clyde, Victor W.
Coleman, George P.
Fell, Verrill W.
Fodrin, Melvin J.
Gibson, W. H.
Greenhalgh, Jack F.
Hannig, Reed A.
Hays, D. H.
Kinne, A. G.
Koontz, Louis
Manhire, John T.
McInnis, J. R.
McMurtrey, E. A.
Meder, Zita D.
Miles, Cyril D.
Odell, W. Alan
Parvin, Jack
Robbins, Paul E.
Smith, Charles F.
Sundeen, Stanley D.

20 TO 25 YEARS

Barrett, Ralph D.
Bawden, John E.
Baxter, George M.
Bradley, Ralph W.
Carroll, Frank J.
Chambers, L. G.
Cochran, L. F.
Cutler, Royal H.
Deck, Ted
DePrati, Pete
Donati, Guido
Doty, Stanley P.
Dube, Paul J.
Gallagher, Thomas L.
Gardner, Bill G.
Gay, Donald V.
Giraud, Joseph J., Jr.
Grier, George R.
Hayman, Walter F.
Howard, A. A.
Johnson, Orrin H.
Kinnikin, Margaret
Kirn, Charles
Lane, Bruce M.
Leavitt, Vincen E.
Manchester, James
McCardle, John E.
McDermott, Tony H.
Metzger, Harry M.
Norton, M. Edgar
Offen, Elmer B.
O'Sullivan, James
Ottini, Ralph J.
Pratt, John W.
Rattazzi, Adele
Ream, Mary L.
Reed, Chester H.
Reil, Orvis E.
Rochon, Mary
Ross, Milton F.
Schulz, Joseph E.
Springmeyer, Stanley
Stevens, Glen S.
Williams, Zeddie A.
Zilkey, Willard O.

15 TO 20 YEARS

Achard, Ruth D.
Anderson, Ivan F.
Aplin, Charles W.
Baker, Matthew J.
Biggs, Robert B.
Bradley, Delile
Chapman, Daniel P.
Christie, H. J.
Clary, Arthur B.
Clevenger, Howard
Cooney, Jack
Crampton, Philip H.
Cronin, Barry E.
Darrough, Raymond F.
Denton, Aubrey W.
Dillwith, Ned E.
Duval, Richard B.
Dwyer, Thomas H.
Egoscue, Philipe
Flournoy, John D.
Garrett, James L.
Gobeli, Fred
Gomes, Joseph V.
Greenhalgh, Harold J.
Gregg, Lawrence W.
Grinnell, George
Ingram, George S.
Inks, Virgil
Jacques, Nelson H.
Joseph, Owen W.
Kleinman, L. H.
Kramer, Jesse J.
Laird, Albert T.
Lani, Benjamin
League, Robert W.
Lorigan, Ray W.
Marriage, Edward C.
Mathews, Woodrow G.
Mayer, Henry H.
McDonald, Margaret
Morgan, J. H.
Muller, Ernest E.
Munson, Warren
Nauman, John B.
Noteware, Norman
Pattani, Jules

15 To 20 Years—*Continued*

Perkins, Clyde K.
Pieretti, Eugene
Primeaux, Patrick
Pringle, Marjorie
Reck, James N., Jr.
Reichenback, Otto K.
Reil, Willis
Reppert, Myrtle
Roberts, Raymond H.
Sanborn, Jack W.
Sharp, Vernon P.
Shewan, William H.
Shirley, Jerome G.
Skanovsky, Bruno
Springer, Thorne E.
Totman, Beryl W.
Trussell, Raymond C.
Vega, Aldo M.
Veith, George L.
Wallace, James D., Jr.
Wilson, William A.
Wise, Roy B.
Woolverton, Gerald K.
Wright, Harold B.
Young, Donald H.

RETIREMENT

Christensen, Joseph O.
Davis, Fred A.
Box, Estelle F.
Harvey, Walter O.
Smith, C. William
Holcomb, W. T.
Mills, H. D.
Berning, Jr., A.
Blaker, C. C.
Trimble, Thomas W.
Fisher, Frank
Abbott, Charles
Brotherton, Harry
Bloxham, Lew J.
Brown, H. Coleman
Kearney, Leo P.
Meacham, Joseph D.

In Memoriam

During the biennium the following employees of the Department of Highways were taken by death:

KEELING, JOHN S.
ELLIS, BILL G.
LONGERO, EUGENE D.
SMITH, F. ELWOOD
LEWIS, R. J.
REID, JOSEPH F.
PARKER, R. E.
MOORE, LEMUEL M.
LEAVITT, JR., THOMAS D.
ANTONIAZZI, TONY J.
GIBSON, ERNEST A.
MCMASTER, CECIL CLYDE
CHAMBERS, ROY D.
MURPHY, CORNELIUS
HEAPS, WILFORD
BILLINGS, SAM
VAN BUREN, JAMES V.
CHILDS, ROBERT A.
RAY, MELVIN H.
WESTALL, GERYL L.